619/259-3140
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PHASE II
ENVIRONMENTAL SITE ASSESSMENT

FOR THE PROPERTY
REFERENCED AS

WARNER MESA
ORANGE COUNTY, CALIFORNIA

PREPARED FOR:

Signal Landmark Corporation
6 Executive Circle, Suite 250
Irvine, CA 92614

PIC Job No. ES7765

December 15, 1998

PIC ENVIRONMENTAL SERVICES
742 GENEVIEVE STREET, SUITE G
SOLANA BEACH, CA 92075

TABLE OF CONTENTS

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619/259-3140 FAX: 619/259-3157

1.0 INTRODUCTION

PIC Environmental Services (PIC) was contracted by Signal Landmark Corporation to perform a Phase II Environmental Site Assessment (ESA) for the Warner Mesa property located at the northeast corner of Pacific Coast Highway and Warner Avenue, Orange County, California (Figure 1). The objectives of this investigation were to evaluate potential environmental concerns identified during a previous Phase I ESA and to evaluate potential environmental impacts due to the abandoned oil wells at the subject property. Potential environmental impacts were evaluated through the collection and analysis of soil samples and soil vapor samples in the vicinity of the areas of potential concern and the previously abandoned oil wells. This report documents the procedures and findings relative to soil and soil vapor sampling and analysis, and was prepared in general accordance with standard environmental contracting and consulting industry practices.

2.0 BACKGROUND

2.1 Site Location and Use

The subject property is located within an unincorporated area of Orange County and is located in the general vicinity of the intersection of Pacific Coast Highway and Warner Avenue in the Huntington Beach area, California (Figure 1). The subject property consists of an approximately 235 acre parcel covered primarily with open grasslands and with limited woodland areas. Several unpaved roads are present throughout the site. The subject property is bounded to the north by Warner Avenue and Los Patos Avenue, to the east by Bolsa Chica Street, to the south by the East Garden Grove Wintersburg Flood Control Channel, and to the west by the Outer Bolsa Bay (Figure 2). The subject property has been used for limited oil production and agriculture historically. In addition, the subject property was previously occupied by the U.S. Army and the Bolsa Chica Gun Club. The subject property is currently unoccupied.

2.2 Topography, Geology, and Hydrology

The elevation of the subject site varies between approximately 10 feet and 55 feet above mean sea level (Figure 1). The subject property is situated on a mesa which is bounded by the Huntington Harbor, Bolsa Bay, and East Garden Grove Wintersburg Flood Control Channel. Grade on the subject property slopes generally towards the west-northwest. Surface drainage at

the subject property varies, based on the location within the property. Surface water generally flows either to the Huntington Harbor or the Bolsa Bay.

The subject property is located within the Orange County Coastal Plain in the Newport-Inglewood Structural Zone. The Coastal Plain covers approximately 775 square miles, and contains a thick sequence of Quaternary and Tertiary sediments deposited on a basement of pre-Tertiary age metamorphic and crystalline rocks. Faulting and structural deformation have occurred in the Newport-Inglewood Structural Zone since the late Miocene; however the greatest activity has occurred since the late Pleistocene. The Newport-Inglewood fault passes from southeast to northwest through the central portion of the property.

The subject site is underlain primarily by Pleistocene age marine terrace deposits (CDMG, 1981). Surficial and near-surficial sediments are relatively young, consisting of recent-age alluvium and coastal deposits, Upper Pleistocene age terrace deposits, and the Lower Pleistocene age San Pedro Formation. Surface soils are generally sands, silts, and clays, typical of tidal marsh/coastal marine depositional environments.

The site lies within the Santa Ana Pressure Subbasin of the Lower Santa Ana River Basin. Beneficial uses of groundwater include municipal, agricultural, industrial service supply, and industrial process supply (CRWQCB, 1994). Information regarding the depth to groundwater and groundwater gradient direction was unavailable; however, groundwater beneath the subject property is most likely located slightly above mean sea level and flows towards the west-southwest.

3.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

3.1 Earth Tech, Inc., June 1996

Earth Tech, Inc. (Earthtech) performed a Phase I Environmental Site Assessment for the subject property in June 1996 in order to identify known and/or potential environmental concerns due to past or present on-site and off-site activities (Earthtech, 1996). The Phase I ESA was conducted in general accordance with ASTM Practice E 1527 and included an on-site inspection, a review of historical aerial photographs, a review of environmental databases, and personal interviews. Earthtech identified several potential environmental concerns which are summarized as follows:

- A fuel dispenser/pump and possible underground storage tank (UST) (area A) at the southwest corner of the property;

- A steel above ground storage tank (AST) (area B) at the northeast corner of the property;

- Inactive soil/groundwater treatment equipment (area C) in the northern portion of the property;
- An above ground 3-stage clarifier (area D) in the northern portion of the property;
- An inactive above ground wet gas pipeline (area E) running southeast to northwest through the central portion of the subject property;
- A possible cluster of ASTs (area F) in the western portion of the property;
- An unknown structure, possibly an AST, (area G) in the western portion of the property;
- A possible cluster of ASTs (area H) at the southwestern portion of the property;
- A former military bunker (area I) in the central portion of the property; and
- A possible AST (area J) at the southeastern corner of the property.

Earthtech recommended collecting and analyzing soil samples from the above mentioned areas in order to assess the possible presence of contaminants.

3.2 PIC Environmental Services - January 1998

Several of the potential environmental concerns identified by Earthtech were addressed by PIC in January 21, 1998 correspondence to Mr. Ed Mountford. The underground storage tank (UST) and fuel dispenser, identified by Earthtech as area A, were removed from the subject property on October 2, 1997. Two (2) soil samples recovered from the beneath the removed UST did not contain detectable concentrations of total petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, or methyl tertiary butyl ether (PIC, 1998). The UST was closed with No Further Action required by the Orange County Health Care Agency, Division of Environmental Health in October 1997. Documentation regarding UST removal operations is provided in Appendix A of this report.

The cylindrical steel AST (area B) observed in the northeastern portion of the property was inspected and it was determined that the AST was used to store and/or treat water that was extracted from a production water well located within approximately 20 feet of the tank (PIC, 1998). PIC concluded that the subject tank was not a potential source of contamination by hazardous or regulated substances.

The soil and groundwater treatment equipment (area C) observed by Earthtech in the northern portion of the property was from mitigation operations performed by Groundwater Technologies,

Inc. (GTI) on behalf of CalResources, Inc. Mitigation measures were conducted in response to a wet gas spill during cleaning (pigging) of the wet gas pipeline. The California Regional Water Quality Control Board (CRWQCB) reportedly issued a written closure letter requiring No Further Action with regards to this matter in April 1996.

PIC personnel uncovered and/or re-abandoned 11 on-site oil exploration and production wells at the subject property between April and November, 1997. No evidence of adverse impacts to the subject property by releases of crude oil, petroleum fuel products, or other potentially hazardous materials as a result of previous oil exploration and production was encountered. The wells were uncovered using backhoe excavation equipment. Soil in the immediate vicinity of the wells was not discolored or stained by petroleum hydrocarbons, nor were petroleum hydrocarbon odors detected. Re-abandonment operations were performed under permits issued by the Resources Agency of California, Department of Conservation, Division of Oil and Gas, and Geothermal Resources.

PIC recommended recovering and analyzing soil samples from the additional areas of potential environmental concern (area D through area J) identified by Earthtech.

4.0 SCOPE OF WORK

The following operations were performed under the supervision of a PIC registered geologist:

- Field investigation of potential environmental concerns identified by Earthtech as area D through area J;
- Recovery and laboratory analysis of soil samples from areas D, E, F, G, and H;
- Recovery and laboratory analysis of soil samples from stockpiled soil consisting of oil well drilling mud and cuttings;
- Installation of seven (7) soil vapor monitoring wells in the vicinity of re-abandoned oil wells; and
- Recovery and laboratory analysis of soil vapor samples collected from the newly installed soil vapor monitoring wells.

5.0 FIELD OPERATIONS

5.1 Soil Sampling Operations

PIC personnel conducted an on-site inspection of the subject property and set stakes on July 28, 1998 in order to assess the location and status of potential environmental concerns identified by Earthtech. Field investigations included inspecting these areas for evidence of previous and/or existing structures and identifying appropriate soil sample locations. Field investigations revealed that the possible former AST location identified by Earthtech as area J was, in fact, the remnants of a concrete retaining wall in the southeast corner of the subject property. Additionally, the possible former military bunker (area I) appears to have been misidentified in the Earthtech report. It is PIC's understanding that the military bunker at the subject property was located in the vicinity of former oil well 151. PIC concluded that this location did not warrant soil sampling and laboratory analyses.

PIC recovered soil samples from areas of potential environmental concern on August 5, 1998 using excavation trench techniques. Trenches were excavated in the vicinity of the potential environmental concerns using backhoe excavation equipment. Trenches were excavated to a maximum depth of approximately five (5) feet below ground surface (bgs). Soil samples were collected from locations exhibiting the possible presence of contaminants, when possible. Soil samples were collected from the teeth of the backhoe excavator bucket using a hand trowel. Each soil sample was packed into a glass jar, capped with a Teflon-lined lid, and stored in an ice-chilled cooler. Soil samples were relinquished to a California-certified analytical laboratory following standard chain of custody procedures.

Soil sample locations, depths, and analytical methods are summarized as follows:

- Five (5) soil samples were recovered from the vicinity of an existing above ground 3-stage concrete clarifier in the northern portion of the property (area D). Soil samples were collected from the native soil to the east and west of the clarifier at one (1) foot below ground surface (bgs) and five (5) feet below ground surface (Figure 2). One additional soil sample (CL3) was collected from soil within the clarifier. Soil samples CL1-1', CL2-1', and CL3 were analyzed for total recoverable petroleum hydrocarbons (TRPH) by EPA Method 418.1, for organochlorine pesticides by EPA Method 8080, and for volatile organic compounds by EPA Method 8260.

- Fourteen (14) soil samples were recovered from the vicinity of the former above ground wet gas pipeline (area E). Soil samples were collected from the native soil at one (1) and five (5) feet bgs from sample locations WGL1 through WGL7 (Figure 2). Soil samples were collected in the approximate locations of elbows in the former pipeline. The fourteen (14) soil samples were analyzed for TRPH by EPA Method 418.1. Soil sample

WGL6-1' was additionally analyzed for hydrocarbon chain distribution by DHS Modified EPA Method 8015.

- Ten (10) soil samples were collected from the vicinity of a possible cluster of ASTs in the western portion of the property (area F). Soil samples were recovered at one (1) and five (5) feet bgs from sample locations F1 through F5 (Figure 2). The five (5) soil samples, collected at one (1) foot bgs, were analyzed for TRPH by EPA Method 418.1, and for organochlorine pesticides by EPA Method 8080. In addition, the soil sample recovered at five (5) feet bgs from sample location F3 was analyzed for organochlorine pesticides by EPA Method 8080.

- Ten (10) soil samples were recovered from the vicinity of a possible former AST in the western portion of the property (area G). Soil samples were recovered at one (1) and five (5) feet bgs from sample locations G1 through G5 (Figure 2). The five (5) soil samples recovered at one (1) foot bgs were analyzed for TRPH by EPA Method 418.1, and for organochlorine pesticides by EPA Method 8080.

- Four (4) soil samples were recovered from the vicinity of a possible cluster of former ASTs in the southwestern portion of the property (area H). Soil samples were recovered at one (1) and five (5) feet bgs from sample locations H1 and H2 (Figure 2). The two (2) soil samples recovered at one (1) foot bgs and the sample recovered at five (5) feet bgs from sample location H1 were analyzed for TRPH by EPA Method 418.1 and for organochlorine pesticides by EPA Method 8080. Soil samples H1-1' and H1-5' were additionally analyzed for hydrocarbon chain distribution by EPA Method 8015.

- Two (2) soil samples were recovered from stockpiled drill-cuttings in the vicinity of abandoned oil well 182 (Figure 2). Soil samples SP1-1 and SP1-2 were analyzed for TRPH by EPA Method 418.1, for hydrocarbon chain distribution by EPA Method 8015, and for CCR Title 22 Metals by EPA Method 6010. Soil samples SP1-1 and SP1-2 were additionally analyzed for soluble barium by the Waste Extraction Test (WET, Title 22, CCR, 66261.100 Appendix II).

5.2 Soil Vapor Sampling Operations

PIC installed soil vapor monitoring wells on August 27, 1998 in the vicinity of seven (7) previously abandoned oil exploration and/or production wells located within proposed residential lots in order to evaluate if mitigation measures were warranted. Soil vapor monitoring wells were installed in the vicinity of the former locations of wells T1, 143M, 152, BL9, BL9A, BL18, and BL23 and were designated as T1-V, 143M-V, 152-V, BL9-V, BL9A-V, BL18-V, and BL23-V, respectively (Figure 2).

Soil vapor monitoring wells were installed using direct-push technology. Expendable probe tips with attached 6-inch long stainless steel screen implants were driven to a depth of approximately ten (10) feet bgs in the vicinity of wells T1, 143M, 152, BL18, and BL23. Screen implants were driven to a depth of six (6) feet bgs and eight (8) feet bgs in the vicinity of wells BL9 and BL9A, respectively, due to the occurrence of shallow groundwater in this portion of the property. Mylar tubing extends from the screen implant to the ground surface, and is attached to wooden stakes which are marked with the monitoring well identification number. The annulus around the stainless steel screen implant was backfilled with glass beads, and hydrated bentonite powder was placed from just above the screen implant to the ground surface. The configuration of the soil vapor monitoring wells is illustrated on Figure 3.

Soil vapor samples were collected from the seven (7) newly installed monitoring wells on August 27, 1998. The wells were purged of standing air, and the soil vapor samples were collected in Tedlar bags using a vapor sampling vacuum chamber. Soil vapor samples were relinquished to a California-certified analytical laboratory following standard chain of custody procedures. Soil vapor samples were analyzed for total vapor petroleum hydrocarbons (TVPH) and for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method TO-3, for methane by ASTM Method D-1946, and for hydrogen sulfide by EPA Method 15/16.

6.0 LABORATORY RESULTS

6.1 Soil Sample Results

The laboratory results of soil samples recovered in the vicinity of areas of potential environmental concern are summarized in Tables 1 and 2, and are briefly summarized as follows:

- TRPH and organochlorine pesticide concentrations were below laboratory detection limits in the three (3) soil samples recovered in the vicinity of the existing concrete clarifier (area D). Tetrachloroethene (PCE) was detected in soil sample CL1-1' at 8.1 µg/kg. No other VOCs were detected.

- TRPH concentrations in the soil samples recovered from beneath the former wet gas pipeline (area E) were below laboratory detection limits (10 mg/kg) in all samples, with the exception of WGL6-1'. TRPH was detected in sample WGL6-1' at 14 mg/kg, however hydrocarbon chain distribution analysis indicated that petroleum hydrocarbon concentrations were below laboratory detection limits (1.0 mg/kg) for all carbon ranges tested (Table 1).

- TRPH concentrations were below laboratory detection limits (10 mg/kg) in the five (5) soil samples recovered from the vicinity of the possible former cluster of ASTs in the

western portion of the property (area F). 4,4'-DDE was detected in soil sample F3-1' at 7.8 µg/kg. No other organochlorine pesticides or VOCs were detected.

- TRPH, organochlorine pesticide, and VOC concentrations were below laboratory detection limits in the five (5) soil samples recovered from the vicinity of a possible former AST in the western portion of the property (area G).

- TRPH concentrations in the vicinity of the possible former cluster of ASTs in the southwestern portion of the property (area H) ranged from below laboratory detection limits (10 mg/kg) to 32 mg/kg. The hydrocarbon chain distribution analysis performed on sample H1-1' indicated that the maximum petroleum hydrocarbon concentration (379 mg/kg) was detected in the C23 to C32 range (Table 1). 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in sample H1-1' at 13 µg/kg, 39 µg/kg, and 99 µg/kg, respectively. No other organochlorine pesticides were detected. TRPH and organochlorine pesticide concentrations were below the laboratory detection limits in sample H1-5'.

- TRPH concentrations in the stockpiled soil in the vicinity of abandoned well 182 ranged from 133 mg/kg to 301 mg/kg. The hydrocarbon chain distribution analysis performed on sample SP1-1 indicated that the maximum petroleum hydrocarbon concentration (1,080 mg/kg) was detected in the C23 to C32 range (Table 1). The hydrocarbon chain distribution analysis performed on sample SP1-2 indicated that petroleum hydrocarbon concentrations were below laboratory detection limits (1.0 mg/kg) for all carbon ranges tested (Table 1). Total barium concentrations ranged from 1,230 mg/kg to 1,730 mg/kg, and soluble barium concentrations ranged from 7.2 mg/l to 8.8 mg/l. Other metals analysis results are summarized in Table 2.

6.2 Soil Vapor Sample Results

Methane and hydrogen sulfide concentration were below laboratory detection limits (2.0 ppm (v/v) and 0.20 ppm (v/v), respectively) in all soil vapor samples. TVPH concentrations ranged from below laboratory detection limits (1.0 ppm (v/v)) to 2.2 ppm (v/v). The maximum TVPH concentration was detected in soil vapor sample BL9-V-1. Benzene and ethylbenzene concentrations were below laboratory detection limits (0.020 ppm (v/v)) in all soil vapor samples. Toluene concentrations ranged from below laboratory detection limits (0.020 ppm (v/v)) to 0.071 ppm (v/v), and xylenes concentrations ranged from below laboratory detection limits (0.020 ppm (v/v)) to 0.053 ppm (v/v). Soil vapor sample results are summarized in Table 3. Laboratory reports are provided in Appendix B of this report.

7.0 DISCUSSION

The lateral and vertical distribution of soil contaminants appears to be adequately defined in the areas investigated. Contaminant distributions are illustrated in Figure 2 and are summarized as follows:

Petroleum Hydrocarbons

Soil impacted with petroleum hydrocarbons is primarily limited to the stockpiled soil in the north-central portion of the property. The maximum TRPH concentration in this area was 301 mg/kg; however, hydrocarbon chain distribution analysis indicates that the maximum concentration of petroleum hydrocarbons was 1,080 mg/kg in the C23 to C32 range. PIC estimates the volume of petroleum hydrocarbon impacted soil in this area to be less than 200 cubic yards.

Petroleum hydrocarbons were additionally detected in soil samples collected in the vicinity of the former wet gas pipeline (area E) and the possible former cluster of ASTs (area H). The maximum TRPH concentration in these areas was 32 mg/kg, and hydrocarbon chain distribution analysis indicated a maximum hydrocarbon concentration of 379 mg/kg in the C23 to C32 range. Petroleum hydrocarbon impacted soil appears to be limited to between one (1) foot bgs and five (5) feet bgs.

Organochlorine Pesticides

The distribution of organochlorine pesticides appears to be limited to the vicinity of the existing concrete clarifier and the possible former clusters of ASTs (area F and area H). The organochlorine pesticides of primary concern appear to be 4,4'-DDT and its derivatives 4,4'-DDD and 4,4'-DDE. The vertical distribution of pesticides appears to be limited to near surficial soils (less than 5 feet bgs). The maximum concentration of 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were 0.013 mg/kg, 0.039 mg/kg, 0.099 mg/kg, respectively, which are well below their Total Threshold Limit Concentrations (TTLC) of 1.0 mg/kg. In addition, the maximum contaminant concentrations (0.099 mg/kg) were less than 10 times the Soluble Threshold Limit Concentrations (1.0 mg/l), therefore a Waste Extraction Test (WET) was not warranted.

Volatile Organic Compounds

Tetrachloroethene (PCE) was the only VOC detected. PCE was detected in the soil sample collected at one (1) foot below grade from the native soil east of the existing concrete clarifier (area D) at a concentration of 8.1 µg/kg. There did not appear to be any areas significantly impacted with VOCs, including the above-referenced concrete clarifier.

CCR Title 22 Metals

Several metals were detected in the soil samples recovered from the stockpiled soil in the north-central portion of the subject property, however barium was the only metal detected at a

concentration greater than its soluble threshold limit concentration (STLC). The maximum concentration of total barium was 1,730 mg/kg, which is between the STLC and the total threshold limit concentration (TTLC), (100 mg/l and 10,000 mg/kg, respectively); therefore, WET analyses were performed. The WET analyses yielded a maximum soluble barium concentration of 8.8 mg/L, which is less than the STLC for barium (100 mg/L).

Soil Vapor Analyses

Soil vapor sample analyses indicate that the previously abandoned oil wells investigated have not significantly impacted the subsurface soil. Methane, hydrogen sulfide, benzene, and ethylbenzene concentrations were below laboratory detection limits, and the maximum TVPH, toluene, and xylenes concentrations were 2.2 ppm (v/v), 0.071 ppm (v/v), and 0.053 ppm (v/v), respectively. The low concentrations of TVPH, toluene, and xylenes encountered do not reflect a release of liquid or gaseous petroleum hydrocarbons. The additional abandoned oil wells at the subject property were not investigated at this time because they are located within the proposed greenbelt location.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Results of the above-referenced site assessment operations prompt the following conclusions and recommendations:

1. Soil impacted with petroleum hydrocarbons appears to be limited to the stockpiled drill cuttings and mud in the north-central portion of the property. PIC recommends leaving this soil in the proposed greenbelt area.

2. Soil at the subject property does not appear to be significantly impacted with organochlorine pesticides, volatile organic compounds (VOCs), or metals. Based on the concentrations of organochlorine pesticides, VOCs, and metals detected, additional assessment activities and/or mitigation operations do not appear warranted.

3. The subsurface soil at the subject property does not appear to have been significantly impacted by the abandoned oil wells investigated in this assessment. The additional abandoned oil wells, located within the proposed greenbelt, do not warrant investigation at this time due to the proposed land use in these areas.

4. In PIC's judgement, the areas of potential environmental concern, identified by Earthtech and PIC in previous environmental investigations, have been assessed and determined to not pose a significant threat to human health or ecological receptors. Therefore, PIC recommends No Further Action at this time in regards to the potential environmental concerns identified at the subject property.

5. PIC recommends consulting with local and/or state regulatory agencies in order to verify that additional assessment and/or mitigation activities will not be required based on the proposed use of the subject property.

This report is intended for the exclusive use of the above named clients and governmental regulatory agencies only. **PIC Environmental Services** assumes no responsibility nor liability for the reliance herein or hereof by anyone other than the above named clients and governmental agencies. In addition, all laboratory work cited in this report was prepared under the supervision of Cheryl De Los Reyes of Advanced Technology Laboratories in Signal Hill, California, and Maria Jones of Quanterra Environmental Services in City of Industry, California, who are responsible for the contents and conclusions of the laboratory data.

Should you have any questions or comments regarding the contents of this report, please contact me at (619) 259-3140.

Respectfully submitted,
PIC Environmental Services

Daniel C. Oliver
California Registered Geologist #4781
President

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TABLE 1
SOIL ANALYTICAL RESULTS

Sample ID	TRPH mg/kg	HYDROCARBON CHAIN DISTRIBUTION (mg/kg)						4,4'-DDD µg/kg	4,4'-DDE µg/kg	4,4'-DDT µg/kg	VOCs µg/kg
		<C10	C10-C12	C13-C15	C16-C22	C23-C32	>C32				
CL1-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	PCE - 8.1*
CL2-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	ND
CL3	<10	--	--	--	--	--	--	<4.0	6.5	<4.0	--
WGL1-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL1-5'	<10	--	--	--	--	--	--	--	--	--	--
WGL2-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL2-5'	<10	--	--	--	--	--	--	--	--	--	--
WGL3-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL3-5'	<10	--	--	--	--	--	--	--	--	--	--
WGL4-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL4-5'	<10	--	--	--	--	--	--	--	--	--	--
WGL5-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL5-5'	<10	--	--	--	--	--	--	--	--	--	--
WGL6-1'	14	<1.0	<1.0	<1.0	<10	<10	<10	--	--	--	--
WGL6-5'	<10	--	--	--	--	--	--	--	--	--	--

TABLE 1
SOIL ANALYTICAL RESULTS

Sample ID	TRPH mg/kg	HYDROCARBON CHAIN DISTRIBUTION (mg/kg)						4,4'-DDD µg/kg	4,4'-DDE µg/kg	4,4'-DDT µg/kg	VOCs µg/kg
		≤C10	C10-C12	C13-C15	C16-C22	C23-C32	>C32				
WGL7-1'	<10	--	--	--	--	--	--	--	--	--	--
WGL7-5'	<10	--	--	--	--	--	--	--	--	--	--
SP1-1	301	<1.0	29	52	61	1080	140	--	--	--	--
SP1-2	133	<1.0	<1.0	<1.0	<10	<10	<10	--	--	--	--
F1-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
F2-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
F3-1'	<10	--	--	--	--	--	--	<4.0	7.8	4.8	--
F3-5'	--	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
F4-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
F5-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
G1-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
G2-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
G3-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
G4-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--
G5-1'	<10	--	--	--	--	--	--	<4.0	<4.0	<4.0	--

TABLE 1
SOIL ANALYTICAL RESULTS

Sample ID	TRPH mg/kg	HYDROCARBON CHAIN DISTRIBUTION (mg/kg)						4,4'-DDD µg/kg	4,4'-DDE µg/kg	4,4'-DDT µg/kg	VOCs µg/kg
		< C10	C10-C12	C13-C15	C16-C22	C23-C32	> C32				
H1-1'	32	< 1.0	44	102	101	379	85	13	39	99	--
H1-5'	< 10	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	--
H2-1'	< 10	--	--	--	--	--	--	< 4.0	< 4.0	< 4.0	--

Only compounds detected are summarized in this Table
* - All other volatile organic compound (VOC) concentrations were below laboratory detection limits
PCE - tetrachloroethene
TRPH - total recoverable petroleum hydrocarbons
TRPH analyzed by EPA Method 418.1
Hydrocarbon Chain Distribution analyzed by EPA Method 8015
Pesticides analyzed by EPA Method 8080
Volatile Organic Compounds (VOCs) analyzed by EPA Method 8260

TABLE 2
SOIL ANALYTICAL RESULTS
CCR Title 22 Metals

Sample ID	Antimony mg/kg	Arsenic mg/kg	Barium - TTLC mg/kg	Barium - STLC mg/L	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg
SP1-1	0.77	6.1	1730	7.2	14	4.5	16	46	1.8	9.8	0.54	0.30	0.39	19	55
SP1-2	0.89	6.5	1230	8.8	14	6.5	12	17	1.3	10	0.71	0.30	0.76	26	40

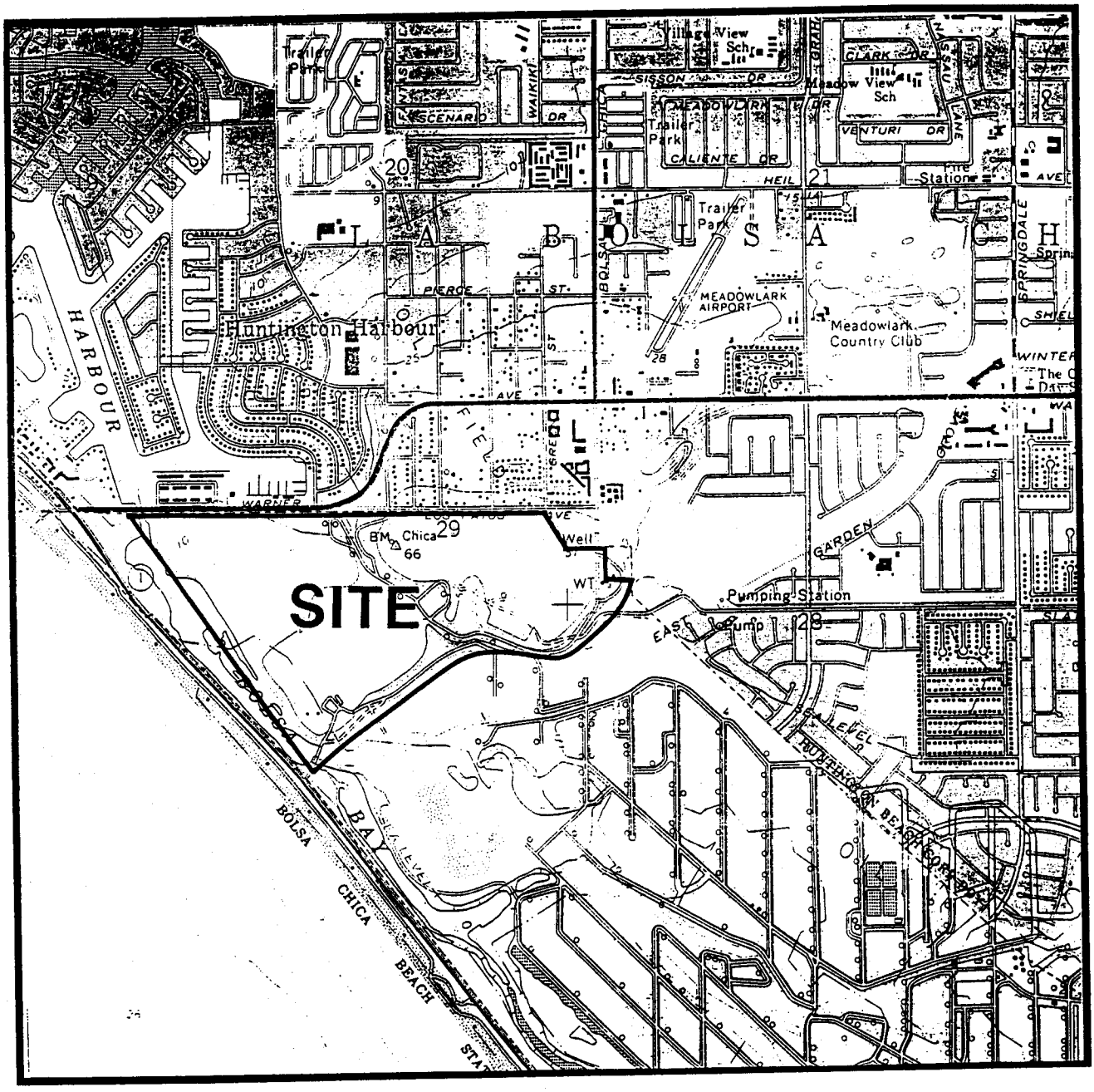
Only constituents detected are summarized in this Table
CCR Title 22 Metals analyzed by EPA Method 6010
Barium STLC analyzed by WET (Title 22, CCR, 66261.100 Appendix II)

TABLE 3
SOIL VAPOR ANALYTICAL RESULTS

Sample ID	Methane ppm (v/v)	Hydrogen Sulfide ppm (v/v)	TVPH ppm (v/v)	Benzene ppm (v/v)	Toluene ppm (v/v)	Ethylbenzene ppm (v/v)	Xylenes ppm (v/v)
BL9-V-1	<2.0	<0.20	2.2	<0.020	0.071	<0.020	0.053
BL9A-V-1	<2.0	<0.20	<1.0	<0.020	0.020	<0.020	0.024
BL18-V-1	<2.0	<0.20	<1.0	<0.020	0.026	<0.020	0.028
BL23-V-1	<2.0	<0.20	1.2	<0.020	0.034	<0.020	0.030
T1-V-1	<2.0	<0.20	1.8	<0.020	0.024	<0.020	0.031
143M-V-1	<2.0	<0.20	<1.0	<0.020	0.021	<0.020	0.029
152-V-1	<2.0	<0.20	<1.0	<0.020	<0.020	<0.020	<0.020

Methane analyzed by ASTM Method D1946
Hydrogen Sulfide analyzed by EPA Method 15/16
TVPH and BTEX analyzed by EPA Method TO-3

FIGURES

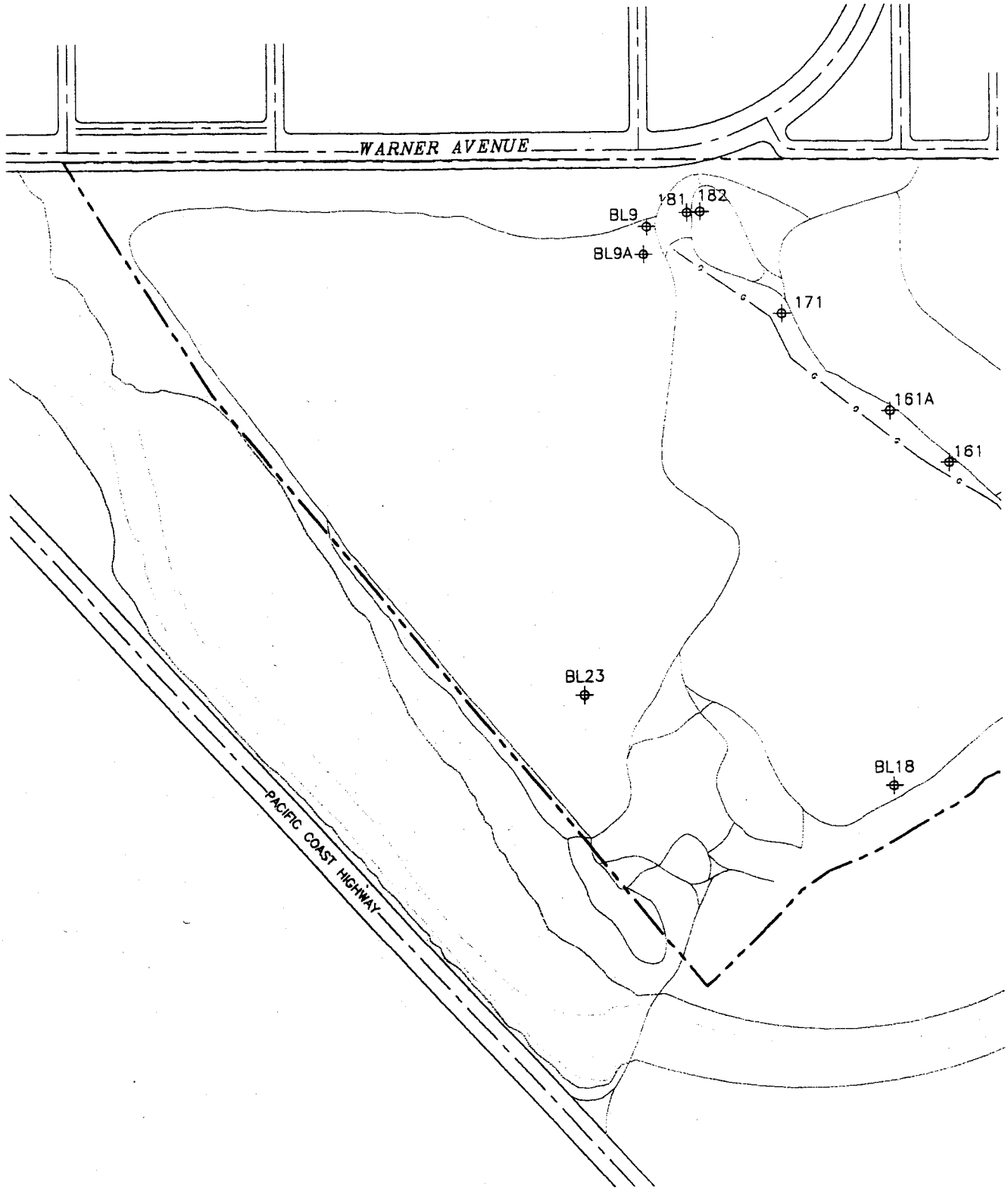


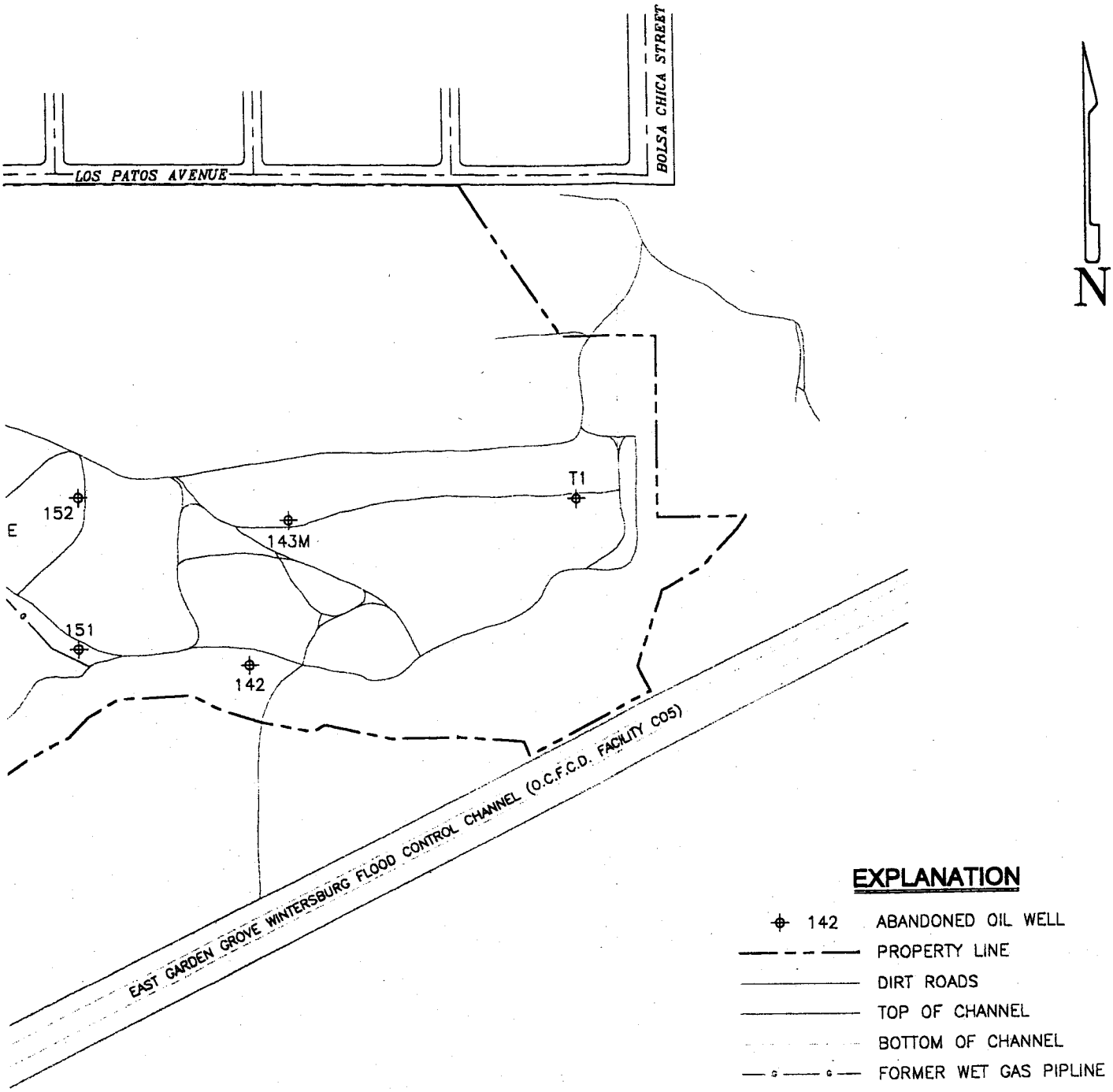
SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE
SEAL BEACH, CALIFORNIA
7.5 MINUTE SERIES

SITE LOCATION

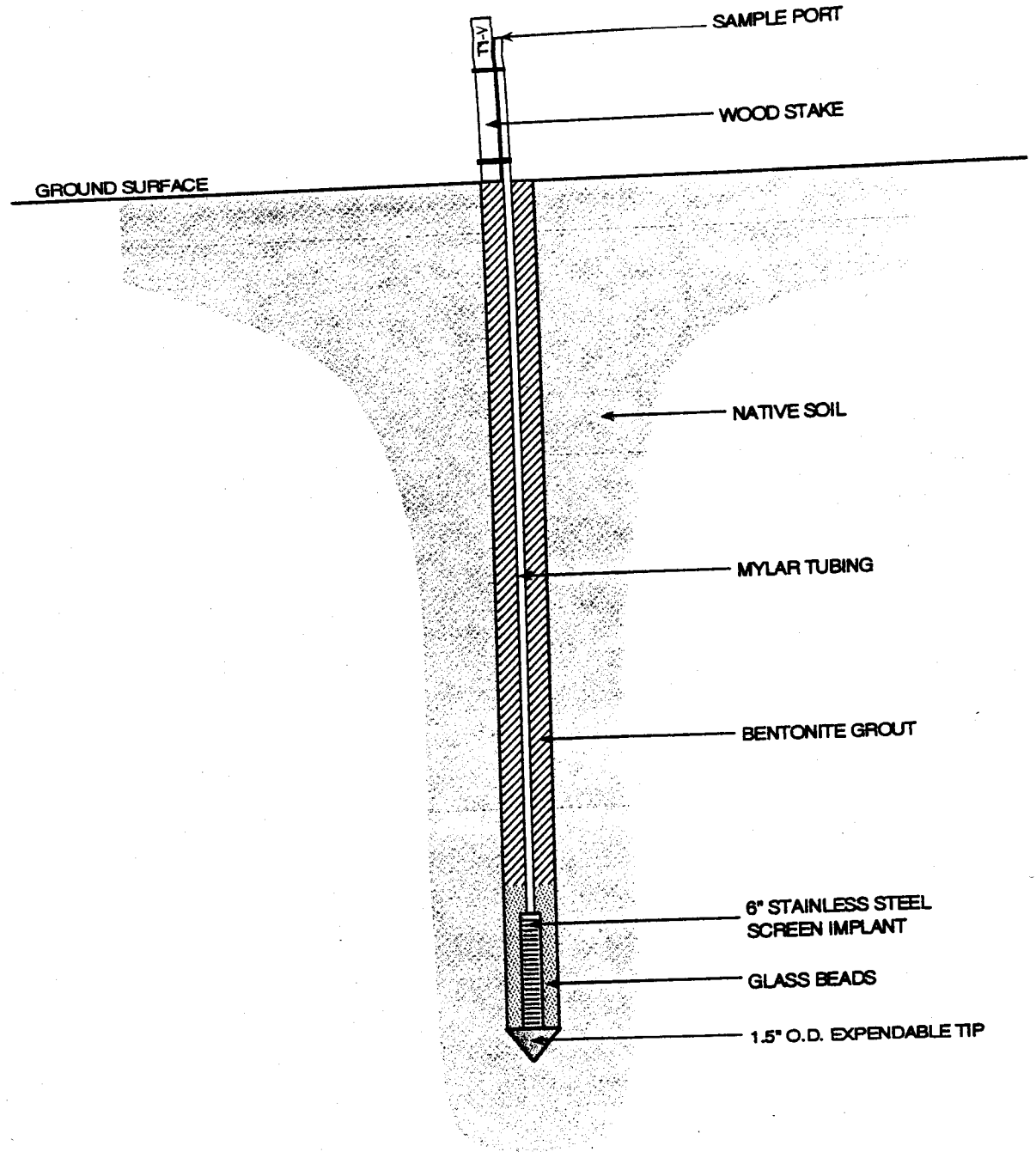
SCALE 1:24,000

PIC ENVIRONMENTAL SERVICES 742 GENEVIEVE STREET - SUITE G SOLANA BEACH, CA 92075	0 1000 2000 SCALE IN FEET	**SITE LOCATION MAP**	
CLIENT: SIGNAL LANDMARK CORPORATION	FILE: 7765SL (1:1)	PROJECT MANAGER: DANNY OLIVER	PROJECT NO.: ES 7665
LOCATION: WARNER MESA ORANGE COUNTY, CALIFORNIA	DRAFTED BY: LA JOLLA GRAPHIX	DATE: DECEMBER 1998	FIGURE: 1


WARNER AVENUE
BL9
181
182
BL9A
171
161A
161
BL23
BL18
PACIFIC COAST HIGHWAY



PIC ENVIRONMENTAL SERVICES 742 GENEVIEVE STREET - SUITE G SOLANA BEACH, CA 92075	0 250 500 SCALE IN FEET	SITE PLAN	
CLIENT: SIGNAL LANDMARK CORPORATION	FILE: 7765SM (1:500)	PROJECT MANAGER: DANNY OLIVER	PROJECT NO.: ES 7765
LOCATION: WARNER MESA ORANGE COUNTY, CALIFORNIA	DRAFTED BY: LA JOLLA GRAPHIX	DATE: DECEMBER 1998	FIGURE: 2



PIC ENVIRONMENTAL SERVICES 742 GENEVIEVE STREET - SUITE G SOLANA BEACH, CA 92075	SOIL VAPOR MONITORING WELL CONFIGURATION	
CLIENT: HEARTHSIDE HOMES	PROJECT MANAGER: DANNY OLIVER	PROJECT NO.: ES 7765
LOCATION: WARNER MESA ORANGE COUNTY, CALIFORNIA	DATE: DECEMBER 1998	FIGURE: 4

APPENDIX A

UST REMOVAL DOCUMENTATION

E5765

COUNTY OF ORANGE
HEALTH CARE AGENCY

PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

JACK MILLER, REHS
DEPUTY DIRECTOR

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 972-0749

October 24, 1997

Ed Mountford
Signal Bolsa Corporation
4400 MacArthur Boulevard
Newport Beach, CA 92660

Subject: Completion of Tank Removal Project
Former Bolsa Chica Gun Club, Northeast Corner of Warner Avenue and Pacifcic Coast Highway, Huntington Beach, CA 92649

Dear Mr. Mountford:

This is in response to your request for a confirmation of the completion of the tank removal project. With the provision that the results for the soil samples obtained during the tank removal on October 2, 1997 were accurate and representative of existing conditions, it is the position of this office that no significant soil contamination has occurred at the above noted facility location.

It should be pointed out that this letter does not relieve you of any responsibilities mandated under the California Health and Safety Code if additional or previously unidentified contamination is discovered at the subject site.

If you have any questions regarding this matter, please contact Peter Peuron at (714) 667-3719.

Very truly yours,

Seth J. Daugherty, REHS
Supervising Hazardous Waste Specialist
Hazardous Materials Management Section
Environmental Health Division

SJD:pp

cc: Danny Oliver, PIC Environmental Services

PIC ENVIRONMENTAL SERVICES
742 GENEVIEVE STREET, SUITE G, SOLANA BEACH, CA 92075
619/259-3140 FAX: 619/259-3157

October 17, 1997

Mr. Peter Peuron
County of Orange
Health Care Agency
Department of Environmental Health
2009 E. Edinger Avenue
Santa Ana, CA 92705

Dear Mr. Peuron:

RE: Underground Storage Tank Removal/Closure
Former Bolsa Chica Gun Club
Bolsa Chica Mesa, Orange County, California

PETROLEUM INDUSTRY CONSULTANTS, INC. (PIC) is pleased to submit the enclosed documents to confirm removal and disposition of a 280-gallon gasoline underground storage tank (UST) on October 2, 1997. These documents include:

- Uniform Hazardous Waste Manifest under which non-RCRA hazardous waste liquid extracted from the removed UST was transported by Nieto and Sons Trucking, Inc. and disposed at the DeMenno Kerdoon treatment facility in Compton, California;
- Tank Disposal Form certifying that the tank was received for destruction at the American Metal Recycling, Inc. facility in Ontario, California; and
- Laboratory analytical results report issued by Transglobal Environmental Geochemistry, Inc. (TEG), a California DOHS-certified laboratory, for analyses of soil samples recovered beneath the removed UST.

The soil samples were analyzed for TPH, BTEX, and MTBE. None of these compounds were detected at the respective laboratory detection limits. On the basis of these results, it is our understanding that the removal and closure of this UST will be formally acknowledged in writing by your agency.

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC002126809 Manifest Document No. 26329
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
SIGNAL [illegible]
[illegible]
NEWPORT BEACH, CA 92660
4. Generator's Phone (714) 474-0573

A. State Manifest Document Number 96764345
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone 714-990-6855

5. Transporter 1 Company Name: NIETO AND SONS TRUCKING, INC.
6. US EPA ID Number: CAT080016116
7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
DEMENNO KERDOON
2000 N. ALAMEDA STREET
COMPTON, CA 90222
10. US EPA ID Number: CAT080013352
G. State Facility's ID: CAT080010133
H. Facility's Phone 310-537-7100

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON RCRA HAZARDOUS WASTE LIQUID	001	TT	XXX80	G	State 221 / EPA/Other EXEMPT
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above: a. R-01 b. c. d.

15. Special Handling Instructions and Additional Information
NO SMOKING
WEAR APPROPRIATE PROTECTIVE CLOTHING
EMERGENCY TELEPHONE # (714) 990-6855
alternate disposal sites:
• CROSBY & OVERTON
• 1630 W. 17th STREET - 310-432-5445
• LONG BEACH, CA 90813 CAD028409019

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: DANNY OLIVER, AGENT FOR SIGNATURE — Signature — Month 10 Day 12 Year 97

TRANSPORTER
17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ALEJANDRO ALEGRIA — Signature — Month 10 Day 12 Year 97
18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY
19. Discrepancy Indication Space
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: LARRY [illegible] — Signature — Month Day Year

DO NOT WRITE BELOW THIS LINE.

SC 8022A (4/97)
EPA 8700—22

Green: TRANSPORTER RETAINS

OCT 16 1997

AMERICAN FUEL TANK METAL RECYCLING, INC.

2202 South Milliken Avenue
Ontario, CA 91761
(714) 988-8000

No. 42895

TANK DISPOSAL FORM

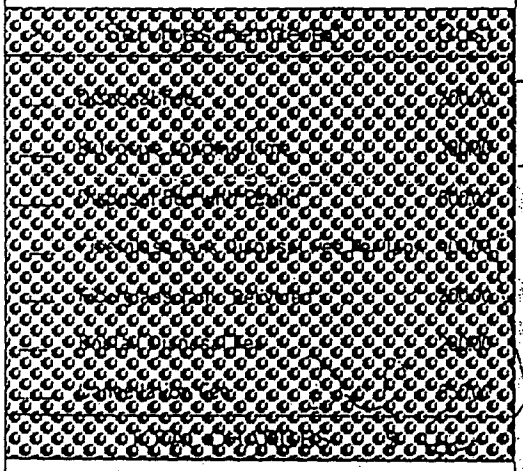
Date: 10-3 ,1997
Job #
P. O. #

CONTRACTOR: PIC
ADDRESS:
JOB SITE: Signal Blvd. Corp.
ADDRESS: 4460 Blue Arthur Blue Mound Rd. 92660
DESTINATION: A.M.R. 2202 S. Milliken Ave., Ontario, CA 91761

DATE	TIME	PROJECTED TANKS	ORDERED BY:	LIC NO.

SPECIAL INSTRUCTIONS: Nieto & Sons.

TIME IN:
TIME OUT:



All fees incurred are per load unless specified. Terms are net 30 days from date of invoice. Contractor's signature represents acceptance of terms for payment, and confirms that tank removal complies with State laws.

CONTRACTOR'S SIGNATURE

TANKS RECEIVED

QTY	GALLONS	TYPE F*	TYPE S*	NET TONS	TOTAL
1	280	☐	☐	.14	
	500	☐	☐	.21	
	550	☐	☐	.24	
	1000 - 12 ft.	☐	☐	.44	
	1000 - 6 ft.	☐	☐	.61	
	1500	☐	☐	.87	
	2000	☐	☐	.97	
	2500	☐	☐	1.14	
	3000	☐	☐	1.32	
	4000	☐	☐	1.64	
	5000	☐	☐	2.42	
	6000	☐	☐	2.84	
	7500	☐	☐	3.26	
	8000	☐	☐	3.44	
	9000	☐	☐	3.82	
	10000	☐	☐	4.33	
	12000	☐	☐	4.93	

NO. OF TANKS 1 TOTAL NET TONS

*F — FIBERGLASS *S — STEEL 105

CERTIFICATE OF TANK DISPOSAL / DESTRUCTION

THIS IS TO CERTIFY THE RECEIPT AND ACCEPTANCE OF THE TANK(S) AS SPECIFIED ABOVE. ALL MATERIALS SPECIFIED HAVE BEEN COMPLETELY DESTROYED FOR SCRAP PURPOSES ONLY.

AUTHORIZED REP.

10-3-97
DATE

GENERATOR COPY

OCT 16 1997

October 15, 1997

Mr. Danny Oliver
PIC Environmental Services
742 Genevieve Street
Suite G
Solana Beach, CA 92075

SUBJECT: DATA REPORT – BOLSA CHICA GUN CLUB – HUNTINGTON BEACH, CA

TEG Project # 971002-11

Mr. Oliver:

Please find enclosed a data report for the above referenced location. Soil samples were analyzed in TEG's DOHS certified mobile laboratory (CERT #1839).

Project Summary

The following analyses were conducted:

- 2 soils for total petroleum hydrocarbons (TPH) by DOHS Modified EPA Method 8015
- 2 soils for volatile aromatic hydrocarbons (BTEX) by Modified EPA Method 8020
- 2 soils for MTBE by Modified EPA Method 8020

The samples were received chilled in appropriate containers with appropriate labels, seals, and chain-of-custody documentation.

Project Narrative

The results for all analyses and required QA/QC analyses are summarized in the enclosed tables. All calibrations, blanks, surrogates, and spike recoveries fulfill quality control criteria. No data qualifiers (flags) apply to any of the reported data.

TEG appreciates the opportunity to provide analytical services to PIC Environmental Services on this project. If you have any questions relating to this data or report, please do not hesitate to contact us.

Sincerely,

Blayne Hartman

Dr. Blayne Hartman

432 NORTH CEDROS AVENUE • SOLANA BEACH, CA 92075 • 619-793-0401 • FAX 619-793-0404

PIC ENVIRONMENTAL SERVICES PROJECT
BOLSA CHICA GUN CLUB
HUNTINGTON BEACH, CA

TEG Project #971002-11

TPH (DOHS EPA Method 8015 Modified) & BTEX (EPA Method 8020 Modified) ANALYSES OF SOILS

SAMPLE NUMBER	DATE ANALYZED	TPH-GAS C5-C11 (mg/kg)	TPH-DIESEL C12-C24 (mg/kg)	TPH C25+ (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZ (mg/kg)	XYLENES (mg/kg)	MTBE (mg/kg)	SURROGATE (%REC)
METHOD BLANK	10/6/97	ND	ND	ND	ND	ND	ND	ND	ND	106%
T1E-6.5'	10/6/97	ND	ND	ND	ND	ND	ND	ND	ND	112%
T1E-6.5' DUP	10/6/97	ND	ND	ND	ND	ND	ND	ND	ND	102%
T1W-6.5'	10/6/97	ND	ND	ND	ND	ND	ND	ND	ND	96%
DETECTION LIMITS		10	10	10	0.050	0.050	0.050	0.050	0.050	65%-135%

ND INDICATES NOT DETECTED AT LISTED DETECTION LIMITS

ANALYSES PERFORMED IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1839)
ANALYSES PERFORMED BY: DR. BLAYNE HARTMAN
DATA REVIEWED BY:

Blayne Hartman
10-16-97

teg

QA/QC REPORT - CALIBRATION DATA

TEG Project #971002-11
DAILY CALIBRATION DATE : 10/6/97

	CALIBRATION RANGE		INITIAL	INITIAL		OPENING			CLOSING / LCS		
COMPOUND	SOIL (ppm)	WATER (ppb)	CALIB DATE	RF	%RSD	AREA	RF	%DIFF	AREA	RF	%DIFF
TPH GASOLINE - FID1	20-2000	600-60000	9/7/97	1.085	15.4%	213	0.939	13.5%	154	1.299	19.7%
TPH DIESEL - FID1	50 - 5000	1500-150000	9/10/97	2.962	3.6%	212	2.358	20.4%	214	2.336	21.1%
BENZENE	0.1-10	.3-300	10/6/97	0.0106	15.2%	101	0.0099	5.7%	94	0.0106	0.7%
TOLUENE	0.1-10	.3-300	10/6/97	0.0103	9.7%	103	0.0097	5.8%	92	0.0109	5.0%
ETHYLBENZENE	0.1-10	.3-300	10/6/97	0.0124	9.2%	89	0.0113	9.0%	87	0.0115	7.2%
m&p-XYLENES	0.1-10	.3-300	10/6/97	0.0100	13.3%	220	0.0091	9.2%	194	0.0103	2.9%
o-XYLENES	0.1-10	.3-300	10/6/97	0.0124	10.3%	98	0.0102	17.7%	78	0.0127	2.6%

INITIAL RF - AVERAGE RESPONSE FACTOR FROM MULTIPOINT CALIBRATION CURVE
% RSD - LINEARITY OF MULTIPOINT CALIBRATION CURVE (+/- 20% ACCEPTABLE LIMITS)
AREA - AREA COUNTS FROM DAILY CALIBRATION STANDARD
RF - DETECTOR RESPONSE FACTOR FROM MID-POINT CALIBRATION STANDARD
% DIFF - DIFFERENCE, IN PERCENT, BETWEEN THE AVERAGE RF AND THE OPENING OR CLOSING RF
OPENING - MID-POINT CALIBRATION STANDARD ANALYZED BEFORE SAMPLE ANALYSES BEGIN
CLOSING - MID-POINT CALIBRATION STANDARD ANALYZED AFTER SAMPLES ANALYSES ARE COMPLETE

ANALYSES PERFORMED IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1839)
ANALYSES PERFORMED BY: DR. BLAYNE HARTMAN
DATA REVIEWED BY:

Blayne Hartman
10-16-97

teg

QA/QC REPORT - MS/MSD DATA

MATRIX SPIKE (MS)/MATRIX SPIKE DUPLICATE (MSD) FOR SOILS

ANALYSIS DATE : 10/06/97
TEG Project #971002-11

COMPOUND	SPK CONC (mg/kg)	MS CONC (mg/kg)	%REC MS	MSD CONC (mg/kg)	%REC MSD	RPD	ACCEPTABLE RPD	ACCEPTABLE RECOVERY
TPH GASOLINE	200	223	111.5%	222	111.0%	0.4%	15%	82% - 122%
TPH DIESEL	500	530	106.0%	530	106.0%	0.0%	15%	72% - 112%
MTBE	1.000	1.059	105.9%	1.134	113.4%	6.8%	15%	75%-125%
BENZENE	1.000	1.048	104.8%	1.015	101.5%	3.2%	15%	77% - 109%
TOLUENE	1.000	0.849	84.9%	0.846	84.6%	0.4%	15%	75% - 112%
ETHYLBENZENE	1.000	0.934	93.4%	0.917	91.7%	1.8%	15%	74% - 110%
TOTAL XYLENES	3.000	3.234	107.8%	3.154	105.1%	2.5%	15%	81% - 109%

SPK CONC - CONCENTRATION SPIKED INTO MATRIX
MS CONC - ANALYZED CONCENTRATION OF SPIKED SAMPLE
% REC - PERCENT RECOVERY OF SPIKE FROM MATRIX
RPD - RELATIVE PERCENT DIFFERENCE BETWEEN MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES

ANALYSES PERFORMED IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1839)
ANALYSES PERFORMED BY: DR. BLAYNE HARTMAN
DATA REVIEWED BY:

Blayne Hartman
10-16-97

CHAIN OF CUSTODY
Orange County Health Care Agency
Environmental Health Division
2009 E. Edinger Ave., Santa Ana, CA 92705
Telephone: (714) 667-3700

1. ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.

2. PLEASE WRITE LEGIBLY.

3. ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.

4. TO BE COMPLETED BY LABORATORY ANALYST

LAB NO.: TFG - Project #971002-11
DATE RECEIVED: 10/2/97
SAMPLE(S) CONDITION (PLEASE CHECK):
CHILLED: Y COUNTY SEAL(S) INTACT: Y
CONTAINER IN GOOD CONDITION: Y
DATE ANALYSIS COMPLETED: _____
ANALYST: _____

5. TO BE COMPLETED BY SAMPLE COLLECTOR

SITE NAME/ADDRESS: BOLSA CHICA GUN CLUB, HUNTINGTON BEACH
DATE OF COLLECTION: 10-2-97
SAMPLE COLLECTOR/COMPANY: PIC DANNY OLIVER
TELEPHONE NO.: (619) 259-3140
HCA REPRESENTATIVE: PETER PEURON

6.

SAMPLE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS	TIME OF COLLECTION
TIE-65	DTSC APPROVED TPH METHOD FOR GASOLINE	BELOW NORTHERN END	
	DTSC APPROVED TPH METHOD FOR DIESEL	OF TANK	
	EPA 8020-BTEX		
	+ MTBE		
TIW-65	SAME 4 ANALYSES	BELOW SOUTHERN END	
	AS ABOVE		

7. CHAIN OF CUSTODY

	SIGNATURE	COMPANY/AGENCY	INCLUSIVE DATES/TIMES
1.	Peter Peuron	OCHCA	10-2-97 . 9:45
2.	Danny Oliver	PIC Environmental Services	10/2/97 . 9:45
3.	Daylon Thorpe	TEG	10/2/97 . 2:00
4.	Danny Oliver	TEG	10/2/97 . 2:00
5.			-
6.			-

F272-9.1531.1(R8/89)

WHITE-RETURN THIS COPY TO ENVIRONMENTAL HEALTH, CANARY-LABORATORY COPY
PINK-CONTRACTOR/CONSULTANT COPY, GOLDENROD-OFFICE COPY

APPENDIX B

LABORATORY REPORTS

Advanced Technology Laboratories

August 14, 1998

ELAP No.: 1838

PIC Environmental Services
742 Genevieve St. Ste G
Solana Beach, CA 92075

ATTN: Mr. Danny Oliver

Client's Project: Warner/Mesa, ES7765
Lab No.: 28093-001/045

Gentlemen:

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operation Manager
CDR/ms

Enclosures

This cover letter is an integral part of this analytical report.

Mailing Address: P.O. Box 92797 Long Beach, CA 90809-2797
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: PIC Environmental Services
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Date Amended: 08/18/98

Matrix: Soil
Units: µg/kg
Extraction Method: 3550

EPA Method 8080

Lab No.:	Method Blank		28093-001		28093-003		28093-005		28093-022		28093-024	
Client Sample I.D.:	--		CL1-1'		CL2-1'		CL3		F1-1'		F2-1'	
Date Sampled:	--		08/05/98		08/05/98		08/05/98		08/05/98		08/05/98	
QC Batch #:	G988080S268		G988080S268		G988080S26		G988080S26		G988080S26		G988080S26	
Date Extracted:	08/11/98		08/11/98		08/11/98		08/11/98		08/11/98		08/11/98	
Date Analyzed:	08/11/98		08/11/98		08/11/98		08/11/98		08/11/98		08/11/98	
Analyst Initials:	DT		DT		DT		DT		DT		DT	
Dilution Factor:	1		1		1		1		1		1	
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	1.0	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Gamma-BHC (Lindane)	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Beta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Delta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Aldrin	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor Epoxide	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Endosulfan I	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
4,4'-DDE	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	6.5	4.0	ND	4.0	ND
Dieldrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDD	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endosulfan II	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDT	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endrin Aldehyde	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endosulfan Sulfate	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Methoxychlor	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Chlordane	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Toxaphene	170	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND

MDL = Method Detection Limit
ND = Not Detected (Below DLR)

DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/18/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Date Amended: 08/18/98

Matrix: Soil
Units: µg/kg
Extraction Method: 3550

EPA Method 8080

Lab No.:	Method Blank		28093-026		28093-028		28093-030		28093-032		28093-034	
Client Sample I.D.:	--		F3-1'		F4-1'		F5-1'		G1-1'		G2-1'	
Date Sampled:	--		08/05/98		08/05/98		08/05/98		08/05/98		08/05/98	
QC Batch #:	G988080S268		G988080S268		G988080S268		G988080S268		G988080S268		G988080S268	
Date Extracted:	08/11/98		08/11/98		08/11/98		08/11/98		08/11/98		08/11/98	
Date Analyzed:	08/11/98		08/11/98		08/11/98		08/11/98		08/11/98		08/11/98	
Analyst Initials:	DT		DT		DT		DT		DT		DT	
Dilution Factor:	1		1		1		1		1		1	
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	1.0	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Gamma-BHC (Lindane)	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Beta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Delta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Aldrin	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor Epoxide	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Endosulfan I	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
4,4'-DDE	4.0	4.0	ND	4.0	7.8	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Dieldrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDD	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endosulfan II	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDT	4.0	4.0	ND	4.0	4.8	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endrin Aldehyde	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endosulfan Sulfate	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Methoxychlor	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Chlordane	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Toxaphene	170	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND

MDL = Method Detection Limit
ND = Not Detected (Below DLR)

DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/18/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Date Amended: 08/18/98

Matrix: Soil
Units: µg/kg
Extraction Method: 3550

EPA Method 8080

Lab No.:	Method Blank			28093-036		28093-038		28093-040		28093-042		28093-044	
Client Sample I.D.:	--			G3-1'		G4-1'		G5-1'		H1-1'		H2-1'	
Date Sampled:	--			08/05/98		08/05/98		08/05/98		08/05/98		08/05/98	
QC Batch #:	G988080S268			G988080S268		G988080S268		G988080S268		G988080S268		G988080S268	
Date Extracted:	08/10/98			08/10/98		08/10/98		08/10/98		08/10/98		08/10/98	
Date Analyzed:	08/11/98			08/11/98		08/11/98		08/11/98		08/11/98		08/11/98	
Analyst Initials:	DT			DT		DT		DT		DT		DT	
Dilution Factor:	1			1		1		1		1		1	
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Alpha-BHC	1.0	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND	1.0	ND
Gamma-BHC (Lindane)	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Beta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Delta-BHC	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	[illegible]	2.0	ND
Aldrin	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Heptachlor Epoxide	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
Endosulfan I	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND	2.0	ND
4,4'-DDE	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	39	4.0	ND
Dieldrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endrin	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDD	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	13	4.0	ND
Endosulfan II	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
4,4'-DDT	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	99	4.0	ND
Endrin Aldehyde	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND	4.0	ND
Endosulfan Sulfate	4.0	4.0	ND	4.0	ND	4.0	ND	4.0	[illegible]	4.0	ND	4.0	ND
Methoxychlor	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Chlordane	17	17	ND	17	ND	17	ND	17	ND	17	ND	17	ND
Toxaphene	170	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND

MDL = Method Detection Limit
ND = Not Detected (Below DLR)

DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/18/98

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/kg)

Method : C:\HPCHEM\1\METHODS\PCBPEST1.M (Chemstation Integrator)
Title : 8081 Pesticides Advanced Technology Laboratory
Last Update : Fri Jul 31 11:33:52 1998
Response via : Initial Calibration

Non-Spiked Sample: GB0811A.D

	Spike Sample	Spike Duplicate Sample
File ID :	GMS0811A.D	GMD0811A.D
Sample :	Blank MS	Blank MSD
Acq Time:	11 Aug 1998 12:16 pm	11 Aug 1998 12:51 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
gamma-BHC	0.0	40	43	43	108	109	1	9	50-127
Heptachlor	0.0	40	41	41	101	103	1	15	35-136
Aldrin	0.0	40	44	45	110	112	2	12	47-143
Dieldrin	0.0	80	93	94	116	118	2	8	54-134
Endrin	0.0	80	81	88	102	110	8	16	61-138
4,4'-DDT	0.0	80	67	73	84	91	8	22	15-155

QC Batch #:G988080S268

Reviewed and Appreoved by: _____ Date: 8/14/98
Lee Ingvaldson
Organics Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: PIC Environmental Services
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Matrix: Soil
Units: µg/kg

EPA Method 8260

Lab No.:	Method Blank		28093-001		28093-003					
Client Sample I.D.:	–		CL1-1'		CL2-1'					
Date Sampled:	–		08/05/98		08/05/98					
QC Batch #:	P98VOCS148		P98VOCS148		P98VOCS148					
Date Analyzed:	08/07/98		08/07/98		08/07/98					
Analyst Initials:	SMC		SMC		SMC					
Dilution Factor:	1		1		1					
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results				
Benzene	5	5	ND	5	ND	5	ND				
Bromobenzene	5	5	ND	5	ND	5	ND				
Bromodichloromethane	5	5	ND	5	ND	5	ND				
Bromoform	5	5	ND	5	ND	5	ND				
Bromomethane	5	5	ND	5	ND	5	ND				
n-Butylbenzene	5	5	ND	5	ND	5	ND				
sec-Butylbenzene	5	5	ND	5	ND	5	ND				
tert-Butylbenzene	5	5	ND	5	ND	5	ND				
Carbon tetrachloride	5	5	ND	5	ND	5	ND				
Chlorobenzene	5	5	ND	5	ND	5	ND				
Chloroethane	5	5	ND	5	ND	5	ND				
Chloroform	5	5	ND	5	ND	5	ND				
Chloromethane	5	5	ND	5	ND	5	ND				
2-Chlorotoluene	5	5	ND	5	ND	5	ND				
4-Chlorotoluene	5	5	ND	5	ND	5	ND				
Dibromochloromethane	5	5	ND	5	ND	5	ND				
1,2-Dibromo-3-chloropropane	10	10	ND	10	ND	10	ND				
1,2-Dibromoethane	5	5	ND	5	ND	5	ND				
Dibromomethane	5	5	ND	5	ND	5	ND				
1,2-Dichlorobenzene	5	5	ND	5	ND	5	ND				
1,3-Dichlorobenzene	5	5	ND	5	ND	5	ND				
1,4-Dichlorobenzene	5	5	ND	5	ND	5	ND				
Dichlorodifluoromethane	5	5	ND	5	ND	5	ND				
1,1-Dichloroethane	5	5	ND	5	ND	5	ND				
1,2-Dichloroethane	5	5	ND	5	ND	5	ND				
1,1-Dichloroethene	5	5	ND	5	ND	5	ND				
cis-1,2-Dichloroethene	5	5	ND	5	ND	5	ND				

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed
The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Danny Oliver
Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Matrix: Soil
Units: µg/kg

EPA Method 8260

Lab No.:		Method Blank		28093-001		28093-003					
Client Sample I.D.:		--		CL1-1'		CL2-1'					
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results				
trans-1,2-Dichloroethene	5	5	ND	5	ND	5	ND				
1,2-Dichloropropane	5	5	ND	5	ND	5	ND				
1,3-Dichloropropane	5	5	ND	5	ND	5	ND				
2,2-Dichloropropane	5	5	ND	5	ND	5	ND				
1,1-Dichloropropene	5	5	ND	5	ND	5	ND				
Ethylbenzene	5	5	ND	5	ND	5	ND				
Hexachlorobutadiene	5	5	ND	5	ND	5	ND				
Isopropylbenzene	5	5	ND	5	ND	5	ND				
p-Isopropyltoluene	5	5	ND	5	ND	5	ND				
Methylene Chloride	15	15	ND	15	ND	15	ND				
Naphthalene	5	5	ND	5	ND	5	ND				
n-Propylbenzene	5	5	ND	5	ND	5	ND				
Styrene	5	5	ND	5	ND	5	ND				
1,1,1,2-Tetrachloroethane	5	5	ND	5	ND	5	ND				
1,1,2,2-Tetrachloroethane	5	5	ND	5	ND	5	ND				
Tetrachloroethene	5	5	ND	5	8.1	5	ND				
Toluene	5	5	ND	5	ND	5	ND				
1,2,3-Trichlorobenzene	5	5	ND	5	ND	5	ND				
1,2,4-Trichlorobenzene	5	5	ND	5	ND	5	ND				
1,1,1-Trichloroethane	5	5	ND	5	ND	5	ND				
1,1,2-Trichloroethane	5	5	ND	5	ND	5	ND				
Trichloroethene	5	5	ND	5	ND	5	ND				
Trichlorofluoromethane	5	5	ND	5	ND	5	ND				
1,2,3-Trichloropropane	10	10	ND	10	ND	10	ND				
1,2,4-Trimethylbenzene	5	5	ND	5	ND	5	ND				
1,3,5-Trimethylbenzene	5	5	ND	5	ND	5	ND				
Vinyl Chloride	5	5	ND	5	ND	5	ND				
Xylenes (Total)	5	5	ND	5	ND	5	ND				

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____ Date 8/14/98

Lee Ingvaldson
Department Supervisor

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - Soil(ug/Kg)

Method : C:\HPCHEM\1\METHODS\PVS0728.M (RTE Integrator)
Title : VOC 8240/8260B Advanced Technology Laboratory
Last Update : Tue Jul 28 14:32:43 1998
Response via : Initial Calibration

Non-Spiked Sample: PB0807D.D

	Spike Sample	Spike Duplicate Sample
File ID :	PMS0807A.D	PMD0807A.D
Sample :	28084-01 SPIKE	28084-01 SPIKE DUP
Acq Time:	7 Aug 98 7:32 pm	7 Aug 98 8:00 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-dichloroethene	0.0	100	105	110	105	110	4	20	58-156
benzene	0.0	100	100	108	100	108	7	12	72-134
trichloroethene	0.0	100	101	106	101	106	5	16	55-145
toluene	0.0	100	99	105	99	105	6	16	73-127
chlorobenzene	0.0	100	98	103	98	103	5	11	80-119

QCBATCH#98VOCS148

Reviewed/Approved By: _____ Date: 8/14/98
Lee Ingvaldson
Department Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: PIC Environmental
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765

Date Received: 08/06/98
Date Sampled: 08/05/98

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
28093-001	CL1-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-003	CL2-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-005	CL3	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-006	WGL1-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-007	WGL1-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-008	WGL2-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-009	WGL2-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-010	WGL3-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-011	WGL3-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-012	WGL4-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-013	WGL4-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-014	WGL5-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-015	WGL5-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-016	WGL6-1'	EPA 418.1 (TRPH)	08/13/98	14	Soil, mg/kg	10	10	MO
28093-017	WGL6-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-018	WGL7-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-019	WGL7-5'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-020	SP1-1	EPA 418.1 (TRPH)	08/13/98	301	Soil, mg/kg	10	10	MO

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Reviewed/Approved By: David J. Kern
Department Supervisor

Date: 8/14/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765

Date Received: 08/06/98
Date Sampled: 08/05/98

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
28093-021	SP1-2	EPA 418.1 (TRPH)	08/13/98	133	Soil, mg/kg	10	10	MO
28093-022	F1-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-024	F2-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-026	F3-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-028	F4-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-030	F5-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-032	G1-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-034	G2-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-036	G3-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-038	G4-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-040	G5-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO
28093-042	H1-1'	EPA 418.1 (TRPH)	08/13/98	32	Soil, mg/kg	10	10	MO
28093-044	H2-1'	EPA 418.1 (TRPH)	08/13/98	ND	Soil, mg/kg	10	10	MO

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Reviewed/Approved By: _____ Date: 8/14/98
David J. Kern
Department Supervisor

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Spike Recovery and RPD Summary Report

Method: 418.1
Analyst: MO
Data File: 8225-1S

Date: 08/13/98
Sample ID: 28093-013
Matrix: SOIL
QC Batch: TRPH 980813S-1

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec	METH BLANK	SPL CONC	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
TRPH	mg/Kg	500	469	94	ND	ND	500	437	416	87	83	50-150	5	50	10

Approved by: David J. Kern
Inorganics Supervisor

Date: 8/14/98

Advanced Technology Laboratories

Spike Recovery and RPD Summary Report

Method: 418.1
Analyst: MO
Data File: 8225-2S

Date: 08/13/98
Sample ID: 28093-032
Matrix: SOIL
QC Batch: TRPH 980813S-2

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec	METH BLANK	SPL CONC	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
TRPH	mg/Kg	500	455	91	ND	ND	500	447	421	89	84	50-150	6	50	10

Approved by: David J. Kern
Inorganics Supervisor

Date: 8/14/98

Advanced Technology Laboratories

Client: PIC Environmental Services
Attn: Mr. Danny Oliver

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Matrix: Soil
Units: mg/kg
Digestion Method: EPA 3050

EPA 6010 (CCR Metals)									
Lab No.:		28093-020	28093-021						
Client Sample I.D.:		SP1-1	SP1-2						
Date Sampled:		08/05/98	08/05/98						
Date Digested:		08/12/98	08/12/98						
Date Analyzed:		08/12/98	08/12/98						
Analyst Initials:		LP/DJK	LP/DJK						
Dilution Factor:		1	1						
ANALYTE*	DLR	RESULTS							
Antimony	0.25	0.77	0.89						
Arsenic	0.25	6.1	6.5						
Barium	0.050	1730***	1230***						
Beryllium	0.050	ND	ND						
Cadmium	0.15	ND	ND						
Chromium	0.15	14	14						
Cobalt	0.15	4.5	6.5						
Copper	0.15	16	12						
Lead	0.25	46	17						
Mercury **	0.10	ND	ND						
Molybdenum	0.25	1.8	1.3						
Nickel	0.15	9.8	10						
Selenium	0.25	0.54	0.71						
Silver	0.050	0.30	0.30						
Thallium	0.25	0.39	0.76						
Vanadium	0.15	19	26						
Zinc	0.50	55	40						

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
* = Only listed constituents designated with TTLC and STLC under CCR Title 22
** = Analysis by EPA Method 7471
*** = Dilution Factor is 100, DLR: 5.0

Reviewed/Approved By: David J. Kern
Department Supervisor

Date: 8/14/98

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Spike Recovery and RPD Summary Report

Method: EPA7471
Analyst: DJK
Data File: 80812-2
QA File: 8224-2

Date Analyzed: 08-12-98
Date Digested: 08-12-98
Sample ID: see below
Matrix: SOIL/SOLID
QC Batch NO.: HG980812S-2

SPL ID	UNITS	LCS Conc	LCS Res	% Rec	METH BLANK	SPL CONC	SPL DUP	% Dev	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
28117-010	mg/kg	0.50	0.56	112	ND	ND	ND	0	0.83	0.85	0.89	102	107	63-139	5	30	0.10
28117-020	mg/kg	0.50	0.46	92	ND	ND	ND	0	0.83	0.85	0.69	102	83	63-139	21	30	0.10
28117-030	mg/kg	0.50	0.52	104	ND	ND	ND	0	0.83	0.70	0.75	84	90	63-139	7	30	0.10
28117-039	mg/kg	0.50	0.53	106	ND	ND	ND	0	0.83	1.1	0.93	133	112	63-139	17	30	0.10

Approved by: David J. Kern
David J. Kern
Inorganics Supervisor

Date: 8/14/98

Advanced Technology Laboratories

Spike Recovery and RPD Summary Report

Method: 6010
Analyst: LP/OL
QA File: 8224-4SS
Data File: ICAP80812-4

Date Analyzed: 08/12/1998
Date Digested: 08/12/1998
Sample ID: 28093-021
Matrix: Soil
QC Batch No: ICAP 980812S-1

ANALYTE	UNITS	LCS Conc.	LCS Res.	LCS Rec.	METH BLANK	SPL CONC	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
Antimony	mg/kg	1.0	0.98	98	ND	0.89	125	97	89	77	70	32-110	9	20	0.25
Arsenic	mg/kg	1.0	0.95	95	ND	6.5	125	114	110	86	83	68-105	4	20	0.25
Barium *	mg/kg	1.0	1.0	100	ND	1230	125	1370	1850	112	496	22-170	30	20	0.05
Beryllium	mg/kg	1.0	1.0	100	ND	ND	125	116	110	93	88	47-134	5	20	0.05
Cadmium	mg/kg	1.0	0.94	94	ND	ND	125	106	101	85	81	65-106	5	20	0.15
Chromium	mg/kg	1.0	1.0	100	ND	14	125	122	116	86	82	61-128	5	20	0.15
Cobalt	mg/kg	1.0	0.89	89	ND	6.5	125	114	108	86	81	68-112	5	20	0.15
Copper	mg/kg	1.0	0.92	92	ND	12	125	130	156	94	115	60-133	18	20	0.15
Lead	mg/kg	1.0	0.97	97	ND	17	125	135	129	94	90	68-106	5	20	0.25
Molybdenum	mg/kg	1.0	1.0	100	ND	1.3	125	115	109	91	86	67-107	5	20	0.25
Nickel	mg/kg	1.0	0.94	94	ND	10	125	116	113	85	82	29-155	3	20	0.15
Selenium	mg/kg	1.0	0.90	90	ND	0.71	125	100	96	79	76	51-114	4	20	0.25
Silver	mg/kg	1.0	0.92	92	ND	0.30	125	109	103	87	82	45-111	6	20	0.05
Thallium	mg/kg	1.0	1.0	100	ND	0.76	125	112	106	89	84	60-111	6	20	0.25
Vanadium	mg/kg	1.0	1.0	100	ND	26	125	134	126	86	80	71-116	6	20	0.15
Zinc	mg/kg	1.0	0.92	92	ND	40	125	142	153	82	90	47-128	7	20	0.50

* REC and RPD out of the limit is due to the sample matrix.

Approved by: David J. Kern
Inorganics Supervisor

Date: 8/14/98

Advanced Technology Laboratories

CHAIN OF CUSTODY RECORD

Pg 1 of 2

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☑

Sample Condition Upon Receipt:
1. COOLER TEMP °C _____ (2-6) 5. SEALED Y☐ N☑
2. CHILLED Y☑ N☐ 6. # OF SPLS MATCH COC Y☑ N☐
3. HEADSPACE (VOA) Y☐ N☐ 7. PRESERVED Y☐ N☐
4. CONTAINER INTACT Y☑ N☐ 8. CONTR. LOT # _____

Client: PIC ENVIRONMENTAL SERVICES
Attn: DANNY OLIVER
Address: 742 GRANDVIEW ST., STE. G
City: SOLANA BEACH State: CA Zip Code: 92075
TEL: (619) 259-3140
FAX: (619) 259-3157

Project Name: WARNER MESA Project #: ES7765
Sampler: (Printed Name) DANNY OLIVER (Signature)

Relinquished by: (Signature and Printed Name) Date: 8/6/98 Time:
Received by: (Signature and Printed Name) Date: 8/6/98 Time: 11:30
Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB: (SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
MICHELE OLIVER Date: 8/6/98
Print Name
Signature

Send Report To:
Attn: DANNY OLIVER
Co: PIC Environmental SVCS
Address 742 Grandview #G
City Solana Beach State CA Zip 92075

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 601/8010 (Halogenated Volatiles-GC); 602/8020/BTEX (Aromatic Volatiles-GC); 608/8080 (Pesticides/PCB-GC); 624/8240 (Volatiles-GC/MS); 8260 (Volatiles-GC/MS); 625/8270 (BNA-GC/MS); 8015M TPHG/BTEX(COMBINATION); 8015M TPHD (Diesel-GC); 418.1 (TPH-IR); Metals-Total (CAC-6010/7000); PESTICIDES (EPA 8081); HOLD

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

PRESERVATION

Q A / Q C: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	TAT	Container(s): #	Type	REMARKS
	28093-001	CL1-1'	8/5/98	8:10	E			
	002	CL1-5'		8:15				
	003	CL2-1"		8:45				
	004	CL2-5'		8:50				
	005	CL3		8:55				
	006	WGL1-1'		10:10				
	007	WGL1-5'		10:15				TEST
	008	WGL2-1'		10:40				
	009	WGL2-5'		10:45				

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White ... Yellow ...

CHAIN OF CUSTODY RECORD

Pg 2 of 2

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☑

Sample Condition Upon Receipt:
1. COOLER TEMP °C _____ (2-6) 5. SEALED Y☐ N☑
2. CHILLED Y☑ N☐ 6. # OF SPLS MATCH COC Y☑ N☐
3. HEADSPACE (VOA) Y☐ N☐ 7. PRESERVED Y☐ N☐
4. CONTAINER INTACT Y☑ N☐ 8. CONTR. LOT # _____

Client: PIC Environmental Services
Attn: Danny Oliver
Address: 742 Genevieve St. Ste. G
City Solana Beach State CA Zip Code 92075
TEL: (619) 259-3140
FAX: (619) 259-3157

Project Name: Warner Mesa Project #: ES7765
Sampler: (Printed Name) Danny Oliver (Signature)

Relinquished by: (Signature and Printed Name) Danny Oliver Date: 8/6/98 Time:
Received by: (Signature and Printed Name) Date: 8/6/98 Time: 11:50

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time:
Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB: (SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: MICHELE OLIVER Date: 8/6/98
Print Name
Signature

Send Report To:
Attn: Danny Oliver
Co: PIC Environmental Svcs
Address 742 Genevieve #G
City Solana Beach State CA Zip 92075

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 601/8010 (Halogenated Volatiles-GC); 602/8020/BTEX (Aromatic Volatiles-GC); 608/8080 (Pesticides/PCB-GC); 624/8240 (Volatiles-GC/MS); 8260 (Volatiles-GC/MS); 625/8270 (BNA-GC/MS); 8015M TPHG/BTEX(COMBINATION); 8015M TPH/D (Diesel-GC); 418.1 (TPH-IR); Metals-Total (CAC-8010/7000)

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

PRESERVATION

Q A / Q C: RTNE ☑; RWQCB ☐; WIP ☐; NAVY ☐; CT ☐; OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	TAT	Container(s): #	Type	REMARKS
	28093-010	WGL3-1'	8/5/98	1055	E			
	011	WGL3-5'		1100				
	012	WGL4-1'		1140				
	013	WGL4-5'		1145				
	014	WGL5-1'		1035				
	015	WGL5-5'		1300				
	016	WGL6-1'		1310				
	017	WGL6-5'		1315				
	018	WGL7-1'		1335				
	019	WGL7-5'		1340				

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: W/

CHAIN OF CUSTODY RECORD

Pg 1 of 2

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☑

Sample Condition Upon Receipt:
1. COOLER TEMP °C _____ (2-6) 5. SEALED Y☐ N☑
2. CHILLED Y☑ N☐ 6. # OF SPLS MATCH COC Y☑ N☐
3. HEADSPACE (VOA) Y☐ N☐ 7. PRESERVED Y☐ N☐
4. CONTAINER INTACT Y☑ N☐ 8. CONTR. LOT # _____

Client: PIC Environmental Services
Attn: Danny Oliver
Address: 742 Encinitas St. Ste. G
City Solana Beach State CA Zip Code 92075
TEL: (619) 259-3140
FAX: (619) 259-3157

Project Name: Warner Mesa Project #: ES7765
Sampler: Danny Oliver (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name) Date: 8/6/98 Time: Received by: (Signature and Printed Name) Date: 8/6/98 Time: 17:30
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB:
(SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Michele Oliver Date: 8/6/98
Print Name
Michele Oliver
Signature

Send Report To:
Attn: Danny Oliver
Co: PIC Environmental Svcs
Address 742 Encinitas #G
City Solana Beach State CA Zip 92075

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time
	28093-020	SP1-1	8/5/98	1355
	021	SP1-2		1400
	022	F1-1'		1450
	023	F1-5'		1455
	024	F2-1'		1457
	025	F2-5'		1500
	026	F3-1'		1505
	027	F3-5'		1510
	028	F4-1'		1515
	029	F4-5'		1520

Circle or Add Analysis(es) Requested:
- 601/8010 (Halogenated Volatiles-GC)
- 602/8020/BTEX (Aromatic Volatiles-GC)
- 608/8080 (Pesticides-GC)
- 624/8240 (Volatiles-GC/MS)
- 8260 (Volatiles-GC/MS)
- 625/8270 (BNA-GC/MS)
- 8015M TPH/GBTEX(COMBINATION)
- 8015M TPH/D (Diesel-GC)
- 418.1 (TPH-IR)
- Metals-Total (CAC-6010/7000)
- HOLD

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

TAT	Container(s) #	Container(s) Type	PRESERVATION
E			

QA/QC: RTNE ☑ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

REMARKS

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White ... Yellow ...

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☑

Sample Condition Upon Receipt:
1. COOLER TEMP °C _____ (2-6) 5. SEALED Y☐ N☑
2. CHILLED Y☑ N☐ 6. # OF SPLS MATCH COC Y☑ N☐
3. HEADSPACE (VOA) Y☐ N☐ 7. PRESERVED Y☐ N☐
4. CONTAINER INTACT Y☑ N☐ 8. CONTR. LOT # _____

Client: PIC Environmental Services
Attn: Danny Oliver
Address: 742 Genevieve St. #G
City Solana Beach State CA Zip Code 92075
TEL: (619) 259-3140
FAX: (619) 259-3157

Project Name: Warner Mesa Project #: ES7765 Sampler: DANNY OLIVER (Printed Name)
(Signature)

Relinquished by: (Signature and Printed Name)	Date: 8/6/98	Time:	Received by: (Signature and Printed Name)	Date: 8/6/98	Time: 11:50
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

SHIP TO LAB:
(SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Michele Oliver Date: 8/6/98
Print Name
Michele Oliver
Signature

Send Report To:
Attn: Danny Oliver
Co: PIC Environmental Svcs.
Address 742 Genevieve #G
City Solana Beach State CA Zip 92075

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 601/8010 (Halogenated Volatiles-GC); 602/8020/BTEX (Aromatic Volatiles-GC); 608/8080 (Pesticides) (GC); 624/8240 (Volatiles-GC/MS); 8260 (Volatiles-GC/MS); 625/8270 (BNA-GC/MS); 8015M TPHG/BTEX(COMBINATION); 8015M TPHD (Diesel-GC); 418.1 (TPH-IR); Metals-Total (CAC-6010/7000); VOLD

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

PRESERVATION

Q A / Q C: RTNE ☑ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	TAT	Container(s): #	Type	REMARKS
	28093-030	F5-1'	8/5/98	1525	E			
	031	F5-5'		1534				
	032	G1-1'		1540				
	033	G1-5'		1545				
	034	G2-1'		1550				
	035	G2-5'		1555				
	036	G3-1'		1600				
	037	G3-5'		1605				
	038	G4-1'		1610				
	039	G4-5'		1615				

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White

CHAIN OF CUSTODY RECORD

Pg 1 of 1

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☑

Sample Condition Upon Receipt:
1. COOLER TEMP °C _____ (2-6) 5. SEALED Y☐ N☐
2. CHILLED Y☑ N☐ 6. # OF SPLS MATCH COC Y☑ N☐
3. HEADSPACE (VOA) Y☐ N☐ 7. PRESERVED Y☐ N☐
4. CONTAINER INTACT Y☑ N☐ 8. CONTR. LOT # _____

Client: PIC Environmental Services
Attn: Danny Oliver
Address: 742 Genevieve St. #G
City Solana Beach State CA Zip Code 92075
TEL: (619) 259-3140
FAX: (619) 259-3157

Project Name: Warner Mesa Project #: ES7705 Sampler: (Printed Name) DANNY OLIVER (Signature)

Relinquished by: (Signature and Printed Name) Date: 8/6/98 Time: Received by: (Signature and Printed Name) Date: 8/6/98 Time: 11:51
Relinquished by: (Signature and Printed Name) Date: 8/6/98 Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB: (SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
MICHAEL OLIVER Date: 8/6/98
Print Name
Michael Oliver
Signature

Send Report To:
Attn: Danny Oliver
Co: PIC Environmental SVCS
Address 742 Genevieve #G
City Solana Beach State CA Zip 92075

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 601/8010 (Halogenated Volatiles-GC); 602/8020/BTEX (Aromatic Volatiles-GC); 608/8080 (Pesticides-GC); 624/8240 (Volatiles-GC/MS); 8260 (Volatiles-GC/MS); 625/8270 (BNA-GC/MS); 8015M TPHG/BTEX(COMBINATION); 8015M TPHD (Diesel-GC); 418.1 (TPH-IR); Metals-Total (CAC-6010/7000); HOLD

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	TAT	Container(s): #	Type	PRESERVATION	REMARKS
	28093-040	G5-1'	8/4/98	1620	E				
	041	G5-5'		1625					
	042	H1-1'		1635					
	043	H1-5'		1640					
	044	H2-1'		1645					
	045	H2-5'		1650					

QA/QC: RTNE ☒ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with ... Yellow ... Pink ...

Advanced Technology
Laboratories

August 25, 1998

ELAP No.: 1838

PIC Environmental Services
1768 Arrow Highway, Suite 102
La Verne, CA 91750

ATTN: Mr. Scott Green

Client's Project: Warner Mesa, ES7765
Lab No.: 28334-001/006

Gentlemen:

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/ms

Enclosures

This cover letter is an integral part of this analytical report.

SEP 08 1998

Client: PIC Environmental Services
Attn: Mr. Scott Green

QC Batch #: L988015DS373/I988G20S308
Lab No. : Method Blank
Date Sampled: 08/05/98
Date Received: 08/06/98
Date Extracted: 08/19/98
Date Analyzed: 08/20,21/98
Dilution Factor: 1

Client's Project: Warner Mesa, ES7765

Matrix: Soil

Sample ID.: ---
Analyst Initials: SMC

Hydrocarbon Chain Distribution

Hydrocarbon I.D.	% Weight	Results, mg/kg	Detection Limit, mg/kg
<C10	ND	ND	1.0
C10 - C12	ND	ND	1.0
C13 - C15	ND	ND	1.0
C16 - C22	ND	ND	10
C23 - C32	ND	ND	10
>C32	ND	ND	10

ND = Not Detected.

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/25/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Scott Green

QC Batch #: L988015DS373/I988G20S308
Lab No. : 28334-001
Date Sampled: 08/05/98
Date Received: 08/06/98
Date Extracted: 08/19/98
Date Analyzed: 08/20,21/98
Dilution Factor: 1

Client's Project: Warner Mesa, ES7765

Matrix: Soil

Sample ID.: WGL6-1
Analyst Initials: SMC

Hydrocarbon Chain Distribution

Hydrocarbon I.D.	% Weight	Results, mg/kg	Detection Limit, mg/kg
<C10	ND	ND	1.0
C10 - C12	ND	ND	1.0
C13 - C15	ND	ND	1.0
C16 - C22	ND	ND	10
C23 - C32	ND	ND	10
>C32	ND	ND	10

ND = Not Detected.

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/26/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Scott Green

QC Batch #: L988015DS373/I988G20S308
Lab No. : 28334-002
Date Sampled: 08/05/98
Date Received: 08/06/98
Date Extracted: 08/19/98
Date Analyzed: 08/20,21/98
Dilution Factor: 1

Client's Project: Warner Mesa, ES7765

Matrix: Soil

Sample ID.: SP1-1
Analyst Initials: SMC

Hydrocarbon Chain Distribution

Hydrocarbon I.D.	% Weight	Results, mg/kg	Detection Limit, mg/kg
<C10	ND	ND	1.0
C10 - C12	2.0	29	1.0
C13 - C15	3.8	52	1.0
C16 - C22	4.5	61	10
C23 - C32	79.2	1080	10
>C32	10.5	140	10

ND = Not Detected.

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/25/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Scott Green

Client's Project: Warner Mesa, ES7765

Matrix: Soil

Sample ID.: SP1-2
Analyst Initials: SMC

QC Batch #:	L988015DS373/I988G20S308
Lab No. :	28334-003
Date Sampled:	08/05/98
Date Received:	08/06/98
Date Extracted:	08/19/98
Date Analyzed:	08/20,21/98
Dilution Factor:	1

Hydrocarbon Chain Distribution

Hydrocarbon I.D.	% Weight	Results, mg/kg	Detection Limit, mg/kg
<C10	ND	ND	1.0
C10 - C12	ND	ND	1.0
C13 - C15	ND	ND	1.0
C16 - C22	ND	ND	10
C23 - C32	ND	ND	10
>C32	ND	ND	10

ND = Not Detected.

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/25/98

The cover letter is an integral part of this analytical report.

Client: PIC Environmental Services
Attn: Mr. Scott Green

QC Batch #: L988015DS373/I988G20S308
Lab No. : 28334-005
Date Sampled: 08/05/98
Date Received: 08/06/98
Date Extracted: 08/19/98
Date Analyzed: 08/20,21/98
Dilution Factor: 1

Client's Project: Warner Mesa, ES7765

Matrix: Soil

Sample ID.: H1-1
Analyst Initials: SMC

Hydrocarbon Chain Distribution

Hydrocarbon I.D.	% Weight	Results, mg/kg	Detection Limit, mg/kg
<C10	ND	ND	1.0
C10 - C12	6.2	44	1.0
C13 - C15	14.4	102	1.0
C16 - C22	14.2	101	10
C23 - C32	53.2	379	10
>C32	12	85	10

ND = Not Detected.

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/25/98

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\1\METHODS\CARBON.M (RTE Integrator)
Title : 8015GAS/ 8020(BTXE)
Last Update : Mon Aug 10 15:03:17 1998
Response via : Initial Calibration

Non-Spiked Sample: 28334-01.D

	Spike Sample	Spike Duplicate Sample
File ID :	IMS0821A.D	IMD0821A.D
Sample :	28334-01 3ppm MS Gas (+BTEX)	28334-01 3ppm MSD Gas (+BTEX)
Acq Time:	21 Aug 1998 10:30 pm	21 Aug 1998 10:55 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Gasoline (mg/kg)	ND	3	2	2	53	56	6	21	41-151
Benzene #2 (ug/kg)	ND	31	20	22	65	70	7	15	42-132
Toluene #2 (ug/kg)	ND	183	110	120	60	66	9	15	42-132

QC BATCH #:I988G20S308

Reviewed and Approved by: _____ Date: 8/25/98
Lee Ingvaldson
Organics Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: PIC Environmental Services
Attn: Mr. Scott Green

Client's Project: Warner Mesa, ES7765
Date Received: 08/06/98
Extraction Method: 3550
Matrix: Soil
Units: ug/kg

EPA Method 8080 (Pesticides)

Lab No.:		Method Blank		28334-004		28334-006							
Client Sample I.D.:		--		F3-5		H1-5							
Date Sampled:		--		08/05/98		08/05/98							
QC Batch #:		H988080S281		H988080S281		H988080S281							
Date Extracted:		08/19/98		08/19/98		08/19/98							
Date Analyzed :		08/21/98		08/21/98		08/21/98							
Analyst Initials:		DT		DT		DT							
Dilution Factor:		1		1		1							
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results						
Alpha-BHC	2	2	ND	2	ND	2	ND						
Gamma-BHC (Lindane)	2	2	ND	2	ND	2	ND						
Beta-BHC	2	2	ND	2	ND	2	ND						
Heptachlor	2	2	ND	2	ND	2	ND						
Delta-BHC	2	2	ND	2	ND	2	ND						
Aldrin	2	2	ND	2	ND	2	ND						
Heptachlor Epoxide	2	2	ND	2	ND	2	ND						
Endosulfan I	2	2	ND	2	ND	2	ND						
4,4'-DDE	4	4	ND	4	ND	4	ND						
Dieldrin	4	4	ND	4	ND	4	ND						
Endrin	4	4	ND	4	ND	4	ND						
4,4'-DDD	4	4	ND	4	ND	4	ND						
Endosulfan II	4	4	ND	4	ND	4	ND						
4,4'-DDT	4	4	ND	4	ND	4	ND						
Endrin Aldehyde	4	4	ND	4	ND	4	ND						
Endosulfan Sulfate	4	4	ND	4	ND	4	ND						
Methoxychlor	17	17	ND	17	ND	17	ND						
Chlordane	17	17	ND	17	ND	17	ND						
Toxaphene	170	170	ND	170	ND	170	ND						

MDL = Method Detection Limit
ND = Not Detected (Below DLR).
DLR = MDL X Dilution Factor
NA = Not Analyzed

Reviewed/Approved By: _____
Lee Ingvaldson
Department Supervisor

Date: 8/25/98

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/Kg)

Method : C:\HPCHEM\1\METHODS\PCBPEST.M (Chemstation Integrator)
Title : 8080 Pesticides
Last Update : Sun Aug 23 15:45:29 1998
Response via : Initial Calibration

Non-Spiked Sample: HB0821B.D

	Spike Sample	Spike Duplicate Sample
File ID :	HMS0821B.D	HL0821A.D
Sample :		
Acq Time:	22 Aug 1998 1:40 am	22 Aug 1998 1:11 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
gamma-BHC	0.0	40	28	28	69	69	0	9	50-127
Heptachlor	0.0	40	29	29	73	73	0	12	35-136
Aldrin	0.0	40	35	35	86	86	0	15	47-143
Dieldrin	0.0	80	62	62	75	74	1	8	54-134
Endrin	0.0	80	65	62	81	78	4	16	61-138
4,4'-DDT	0.0	80	59	59	74	74	0	22	15-155

QCBATCH#H988080S281

Reviewed/Approved By: _____ Date: 8/25/98

Lee Ingvaldson
Organics Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: PIC Environmental Services
Attn: Mr. Tim Hersch

Client's Project: Warner Mesa, ES7765

Date Received: 08/06/98
Date Sampled: 08/05/98
*Date Extracted: 08/19/98
*Extraction Method: WET (Title 22, CCR, 66261.100 Appendix II)

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
28334-002*	SP1-1	EPA 6010 (Barium)	08/21/98	7.2	STLC Extract, mg/L	0.10	0.10	DJK
28334-003*	SP1-2	EPA 6010 (Barium)	08/21/98	8.8	STLC Extract, mg/L	0.10	0.10	DJK
28334-006	H1-5	EPA 418.1 (TRPH)	08/21/98	ND	Soil, mg/kg	10	10	MO

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Reviewed/Approved By: David J. Kern Date: 8/25/98
David J. Kern
Department Supervisor

Date:
Cheryl De Los Reyes
Technical Operations Manager

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report

Method: EPA 6010
Analyst: DJK/OL
Data File: ICP 80821-3
QA File: 8233-3ST

Date Analyzed: 08/21/98
Date Extracted: 08/19/98
Sample ID: 28334-003
Matrix: STLC Extract
QC Batch No.ICAP: 980821ST-1

SAMPLE ID	UNITS	METH BLANK	SPL CONC	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
Barium	mg/L	ND	8.8	50	54	54	90	90	58-124	0	19	0.10
Lead	mg/L	ND	1.8	50	47	47	90	90	67-119	0	9	0.10
Selenium	mg/L	ND	ND	50	46	46	92	92	41-136	0	16	0.10

Approved by: David J. Kem
David J. Kem
Inorganics Supervisor

Date: 8/25/98

Advanced Technology Laboratories

Spike Recovery and RPD Summary Report

Method: 418.1
Analyst: MO
Data File: 8233-1S

Date: 08/21/98
Sample ID: 28311-013
Matrix: SOIL
QC Batch: TRPH 980821S-1

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec	METH BLANK	SPL CONC	SPK ADDED	MS RESULT	MSD RESULT	%MS REC	%MSD REC	% REC Limit	RPD	RPD Limit	MDL
TRPH	mg/Kg	500	492	98	ND	ND	500	510	481	102	96	50-150	6	50	10

Approved by: David J. Kerr
David J. Kerr
Inorganics Supervisor

Date: 8/25/98

Advanced Technology Laboratories

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: BV Date: 8-18 Time: 10:50

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: PIC
Attn: Scott Green
Address: 742 Genevieve Street, Suite G
City Solana Beach State CA Zip Code 92075
TEL: (619) 259-3140
FAX: (619) 259-3157
Project Name: Warner Mesa Project #: ES7765
Sampler: (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: 8-18-98 Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB:
(SUB CONTRACT)
TEST:
ATL #:
DATE:
CLIENT I.D.

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date: / /
Signature

Send Report To:
Attn:
Co:
Address
City State Zip

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other
☐ Return To:

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description / Sample I.D.	Date	Time	6011/8010 (Halogenated Volatiles-GC)	602/8020/BTEX (Aromatic Volatiles-GC)	608/8080 (Pesticides/PCB-GC)	624/8240 (Volatiles-GC/MS)	8260 (Volatiles-GC/MS)	625/8270 (BNA-GC/MS)	8015M TPHG/BTEX(COMBINATION)	8015M TPHD (Diesel-GC)	418.1 (TPH-IR)	Metals-Total (CAC-6010/7000)	X15M CCID	STLC Ba	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
1	28334-001	28093-016/WGL6-1	8/5												X												
2	002	020/SP1-1													X												
3	003	021/SP1-2																									
4	004	027/F3-5				X																					
5	005	042/H1-1													X												
6	006	043/H1-5				X					X																

QA/QC: RTNE ☒ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report Yellow to folder Pink to submitter

Advanced Technology Laboratories

September 14, 1998

ELAP No.: 1838

PIC Environmental Services
742 Genevieve St. Ste G
Solana Beach, CA 92075

ATTN: Mr. Danny Oliver

Client's Project: Warner Mesa
Lab No.: 28622-001/007

Gentlemen:

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

The samples for Methane, Gas/BTEX, and Hydrogen Sulfide analysis were subcontracted to Quanterra Labs.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operation Manager
CDR/ms

Enclosures

This cover letter is an integral part of this analytical report.

Mailing Address: P.O. Box 92797 Long Beach, CA 90809-2797
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Quanterra
Environmental
Services

Quanterra Incorporated
18501 East Gale Avenue #130
City of Industry, California 91748

818 965-1006 Telephone
818 965-1003 Fax

September 8, 1998

ADVANCED TECHNOLOGY LABORATORIES
1500 E. 33rd Street
Signal Hill, CA 90807
ATTN: Mr. Val Mallari

ANALYSIS NO.: 133786-0001/0007-SA
ANALYSES: EPA TO3 - BTEX & TVPH as Gasoline, EPA 15/16 - Hydrogen sulfide, ASTM-D1946 - Methane
DATE SAMPLED: 08/27/98
DATE SAMPLES REC'D: 08/28/98

PROJECT: 28622

Enclosed with this letter is the report on the chemical and physical analyses for the samples from ANALYSIS NO.: 133786-0001/0007-SA as shown above.

The samples were received by Quanterra Incorporated, City of Industry, intact and with the chain-of-custody record attached.

Please note that ND means not detected at the reporting limits expressed.

The preliminary results were faxed to Ms. Rachelle Arada of Advanced Technology Laboratories on September 4, 1998.

All applicable internal quality control analyses including calibrations, method blanks, duplicate control samples (DCS), and other QC met acceptance criteria. Any matrix-related anomalies are indicated using footnotes within the report. Any other anomalies are reported within the narrative. There are no anomalies associated with this report.

Annise FOR
Maria O. Jones
Project Manager

9/8/98
Date
Approved

Quanterra
Environmental Services

SAMPLE DESCRIPTION INFORMATION
for
Advanced Technology Laboratories

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
133786-0001-SA	28622-001/BL9-V-1	AIR	27 AUG 98		28 AUG 98
133786-0002-SA	28622-002/BL9A-V-1	AIR	27 AUG 98		28 AUG 98
133786-0003-SA	28622-003/BL18-V-1	AIR	27 AUG 98		28 AUG 98
133786-0004-SA	28622-004/BL23-V-1	AIR	27 AUG 98		28 AUG 98
133786-0005-SA	28622-005/T1-V-1	AIR	27 AUG 98		28 AUG 98
133786-0006-SA	28622-006/143M-V-1	AIR	27 AUG 98		28 AUG 98
133786-0007-SA	28622-007/152-V-1	AIR	27 AUG 98		28 AUG 98

Quanterra
Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-001/BL9-V-1		
LAB ID:	133786-0001-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.071		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.053		0.020	ppmv

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-002/BL9A-V-1		
LAB ID:	133786-0002-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.020		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.024		0.020	ppmv

ND = Not Detected

Quanterra Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-003/BL18-V-1		
LAB ID:	133786-0003-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.026		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.028		0.020	ppmv

ND = Not Detected

Quanterra Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-004/BL23-V-1		
LAB ID:	133786-0004-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.034		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.030		0.020	ppmv

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-005/T1-V-1		
LAB ID:	133786-0005-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.024		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.031		0.020	ppmv

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-006/143M-V-1		
LAB ID:	133786-0006-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	0.021		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	0.029		0.020	ppmv

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - BTEX

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-007/152-V-1		
LAB ID:	133786-0007-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Benzene	ND		0.020	ppmv
Toluene	ND		0.020	ppmv
Ethylbenzene	ND		0.020	ppmv
Xylenes (total)	ND		0.020	ppmv

ND = Not Detected

Quanterra Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-001/BL9-V-1		
LAB ID:	133786-0001-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	2.2	C	1.0	ppm (v/v)

C = Sample chromatographic pattern is not indicative of the standard pattern used to calibrate the gas chromatograph.

Quanterra
Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-002/BL9A-V-1		
LAB ID:	133786-0002-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	ND		1.0	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-003/BL18-V-1		
LAB ID:	133786-0003-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	ND		1.0	ppm (v/v)

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-004/BL23-V-1		
LAB ID:	133786-0004-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	1.2	C	1.0	ppm (v/v)

C = Sample chromatographic pattern is not indicative of the standard pattern used to calibrate the gas chromatograph.

Quanterra
Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-005/T1-V-1		
LAB ID:	133786-0005-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	1.8	C	1.0	ppm (v/v)

C = Sample chromatographic pattern is not indicative of the standard pattern used to calibrate the gas chromatograph.

Quanterra
Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-006/143M-V-1		
LAB ID:	133786-0006-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	ND		1.0	ppm (v/v)

ND = Not Detected

Quanterra
Environmental Services

EPA TO-3 - TVPH by GC

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-007/152-V-1		
LAB ID:	133786-0007-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 29 AUG 98
Instrument:	GC-5	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
TVPH as Gasoline	ND		1.0	ppm (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-001/BL9-V-1		
LAB ID:	133786-0001-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-002/BL9A-V-1		
LAB ID:	133786-0002-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-003/BL18-V-1		
LAB ID:	133786-0003-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-004/BL23-V-1		
LAB ID:	133786-0004-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-005/T1-V-1		
LAB ID:	133786-0005-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-006/143M-V-1		
LAB ID:	133786-0006-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra
Environmental Services

Fixed Gases
ASTM-D1946

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-007/152-V-1		
LAB ID:	133786-0007-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-1	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Methane	ND		0.00020	% (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-001/BL9-V-1		
LAB ID:	133786-0001-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-002/BL9A-V-1		
LAB ID:	133786-0002-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-003/BL18-V-1		
LAB ID:	133786-0003-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-004/BL23-V-1		
LAB ID:	133786-0004-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-005/T1-V-1		
LAB ID:	133786-0005-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-006/143M-V-1		
LAB ID:	133786-0006-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra
Environmental Services

TB-EPA 15/16-Sulfur Compounds (Tedlar bags)
Method EPA 15/16

Client Name:	Advanced Technology Laboratories		
Client ID:	28622-007/152-V-1		
LAB ID:	133786-0007-SA		
Matrix:	AIR	Sampled: 27 AUG 98	Received: 28 AUG 98
Authorized:	28 AUG 98	Prepared: N/A	Analyzed: 28 AUG 98
Instrument:	GC-4	Dilution: 1.0	

Parameter	Result	Qualifier	RL	Units
Hydrogen sulfide	ND		0.20	ppm (v/v)

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Air Toxics

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run Number (SA,MS,SD,DU)
133786-0001-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0002-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0003-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0004-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0005-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0006-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0007-SA	AIR	EPA-15-16	28 AUG 98-A4	28 AUG 98-A4	
133786-0001-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0002-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0003-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0004-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0005-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0006-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0007-SA	AIR	TO-3-GAS-G	28 AUG 98-A5	28 AUG 98-A5	
133786-0001-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0002-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0003-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0004-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0005-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0006-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0007-SA	AIR	TO-3-BTEX	28 AUG 98-A5	28 AUG 98-A5	
133786-0001-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0002-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0003-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0004-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0005-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0006-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	
133786-0007-SA	AIR	ASTM-D1946	28 AUG 98-A1	28 AUG 98-A1	

Quanterra
Environmental Services

DUPLICATE CONTROL SAMPLE REPORT
Air Toxics
Project: 133786

Category: EPA-15-16 EPA Method 15-16
Matrix: AIR
QC Lot: 28 AUG 98-A4 Date Analyzed: 28 AUG 98
Concentration Units: ppm (v/v)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	%Recovery DCS1	%Recovery DCS2	RPD	Acceptance Limits Recov.	Acceptance Limits RPD
Hydrogen sulfide	0.950	1.20	1.24	127	130	3.0	60-160	25

Category: TO-3-GAS-G Method TO-3 - TVPH as Gasoline
Matrix: AIR
QC Lot: 28 AUG 98-A5 Date Analyzed: 28 AUG 98
Concentration Units: ppm (v/v)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	%Recovery DCS1	%Recovery DCS2	RPD	Acceptance Limits Recov.	Acceptance Limits RPD
TVPH as Gasoline	9.19	10.4	10.3	113	112	1.3	70-125	20

Category: TO-3-BTEX Method TO-3 - BTEX
Matrix: AIR
QC Lot: 28 AUG 98-A5 Date Analyzed: 28 AUG 98
Concentration Units: ppmv

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	%Recovery DCS1	%Recovery DCS2	RPD	Acceptance Limits Recov.	Acceptance Limits RPD
Benzene	1.01	0.936	0.895	93	89	4.4	70-125	20
Toluene	1.02	1.00	0.921	98	90	8.2	70-125	20

Category: ASTM-D1946 Fixed Gases (ASTM-D1946)
Matrix: AIR
QC Lot: 28 AUG 98-A1 Date Analyzed: 28 AUG 98
Concentration Units: % (v/v)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	%Recovery DCS1	%Recovery DCS2	RPD	Acceptance Limits Recov.	Acceptance Limits RPD
Methane	0.0100	0.0105	0.0105	105	105	0.0	80-120	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

METHOD BLANK REPORT
Air Toxics
Project: 133786

Test: EPA-15-16-TB-G Method EPA 15/16 - Sulfur Compounds
Matrix: AIR
QC Run: 28 AUG 98-A4 Date Analyzed: 28 AUG 98

Analyte	Result	Units	Reporting Limit
Hydrogen sulfide	ND	ppm (v/v)	0.20

Test: TO-3-TVPH-GAS-TB-G Method TO-3 - TVPH as Gasoline
Matrix: AIR
QC Run: 28 AUG 98-A5 Date Analyzed: 28 AUG 98

Analyte	Result	Units	Reporting Limit
TVPH as Gasoline	ND	ppm (v/v)	1.0

Test: TO-3-BTEX-TB-G Method TO-3 - BTEX
Matrix: AIR
QC Run: 28 AUG 98-A5 Date Analyzed: 28 AUG 98

Analyte	Result	Units	Reporting Limit
Benzene	ND	ppmv	0.020
Toluene	ND	ppmv	0.020
Ethylbenzene	ND	ppmv	0.020
Xylenes (total)	ND	ppmv	0.020

Test: ASTM-D1946-TB Method ASTM-D1946 - Fixed Gases
Matrix: AIR
QC Run: 28 AUG 98-A1 Date Analyzed: 28 AUG 98

Analyte	Result	Units	Reporting Limit
Methane	ND	% (v/v)	0.00020

ND = Not Detected

CHAIN OF CUSTODY RECORD (1.35.86)

Pg 1 of 1

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☒

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: ATL
Attn: Rachelle Arada
Address: Same as above
City _____ State _____ Zip Code _____
TEL: ( )
FAX: ( )
Project Name: _____ Project #: _____ Sampler: (Printed Name) _____ (Signature) _____

Relinquished by: (Signature and Printed Name) Diane Sullivan Date: 8.28.98 Time: 0900
Received by: (Signature and Printed Name) _____ Date: 8-28-98 Time: 7:30
Relinquished by: (Signature and Printed Name) _____ Date: 8-28-98 Time: 4:30
Received by: (Signature and Printed Name) _____ Date: 8/28/98 Time: 16:30
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____
Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

SHIP TO LAB (SUB CONTRACT) Quanterra
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
_____ Date: / /
Print Name
_____
Signature

Send Report To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments:
PO #: (To follow)
Please fax results!
Note holding time!

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested

CIRCLE APPROPRIATE MATRIX

QA/QC: RTNE ☒ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	601/8010 (Halogenated Volatiles-GC)	602/8020/BTEX (Aromatic Volatiles-GC)	608/8080 (Pesticides/PCB-GC)	624/8240 (Volatiles-GC/MS)	8260 (Volatiles-GC/MS)	625/8270 (BNA-GC/MS)	8015M TPHG/BTEX(COMBINATION)	8015M TPHD (Diesel-GC)	418.1 (TPH-IR)	Metals-Total (CAC-6010/7000)	Methane Hydrogen Sulfide	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
1	1	28622-001/BL9-V-1	8/27							X				X	X					X				2	B		
2	2	002/BL9A-V-1																						2	B		
3	3	003/BL18-V-1																						2	B		
4	4	004/BL23-V-1																						2	B		
5	5	005/T1-V-1																						2	B		
6	6	006/143M-V-1																						2	B		
7	7	007/152-V-1	↓							↓				↓	↓					↓				2	B		

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report. Yellow to folder. Pink to submitter

CHAIN OF CUSTODY RECORD

Pg ____ of ____

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

Batch #: _____ D.O. # _____
P.O.#: _____
Logged By: RV Date: 8/27 Time: 1925

Method of Transport: Walk-in ☑ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☑ 4. SEALED Y☐ N☑
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☑ N☐
3. CONTAINER INTACT Y☑ N☐ 6. PRESERVED Y☐ N☑

Client: PIC ENV. SERVICES
Attn: DANNY OLIVER
Address:
City State Zip Code
TEL: (619) 259-3140
FAX: ( )

Project Name: WARNER MESA Project #:
Sampler: (Printed Name) SCOTT GREEN (Signature) Scott Green

Relinquished by: (Signature and Printed Name) SCOTT GREEN Scott Green Date: 8/27/98 Time: 6:30 PM Received by: (Signature and Printed Name) Dave Wilson Date: 8-27-98 Time: 1835
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

SHIP TO LAB:
(SUB CONTRACT) _____
TEST: _____
ATL #: _____
DATE: _____
CLIENT I.D. _____

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
SCOTT GREEN Date: 8,27,98
Print Name
Scott Green
Signature

Send Report To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments:

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

QA/QC: RTNE ☑ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	601/8010 (Halogenated Volatiles-GC)	602/8020/BTEX (Aromatic Volatiles-GC)	608/8080 (Pesticides/PCB-GC)	624/8240 (Volatiles-GC/MS)	8260 (Volatiles-GC/MS)	625/8270 (BNA-GC/MS)	8015M TPHG/BTEX(COMBINATION)	8015M TPHD (Diesel-GC)	418.1 (TPH-IR)	Metals-Total (CAC-6010/7000)	METHANE	HYDROGEN SULFIDE	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	28622-001	BL9-V-1	8/27/98	SP						X				X	X									E	2	B P	Φ	
	002	BL9A-V-1								X				X	X													
	003	BL18-V-1								X				X	X													
	004	BL23-V-1								X				X	X													
	005	T1-V-1								X				X	X													
	006	143M-V-1								X				X	X													
	007	152-V-1								X				X	X													

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter